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A Preliminary Report on the Active Principle of Bael

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Introduction

Habitat : It grows wild throughout India and Ceylon, whilst cultivation is also carried on.

Botanical characters : It is a large or middle sized tree armed with sharp spines. The root when freshly cut has strong aromatic odour. The fruit is small in the wild variety, and large in the cultivated trees; the average size of the fruit is that of a large orange. Its rind is smooth, yellow in colour, about 3mm. in diameter; the pulp is gelatinous in character, deep orange hued, sweet and of aromatic odour, acidulous and slightly astringent in taste.

Parts used : The full grown fruit, when it just begins to ripe, is best for medicinal purposes; rind of the fruit, root bark, leaves and flowers are also used.

History and uses : The Hindus regard it as a sacred tree, representing increase and fertility, and hence use its leaves and fruit in the worship of Shiva.

Mucilage about the seeds is applied for various purposes in the art, on account of its viscid properties. The rind is used in dyeing. The flower is deemed refrigerant. The fresh leaves yield by expression a bitterish and somewhat pungent juice which diluted with water is occasionally used in the early stages of catarrhal and other fevers. A poultice of the leaves is also applied to inflamed parts. The Chinese use an extract of the young leaves to adulterate opium. The bark of the stem and root is thought to possess febrifuge properties. Decoction of the root bark is also mentioned as a remedy in intermittent fevers, palpitation of the heart, melancholia and hypochondriasis.

Fruit : The Hindu physician regards the unripe fruit as astringent and digestive, and prescribes it in diarrhœa and dysentery. The ripe fruit is said to be cooling and laxative. It is one of the reputed Dasmulas or the ten roots.

Mahomedan writers consider the ripe fruit as hot and dry, tonic and astringent, and they advise it in dysentery and atonic dyspepsia.

Besides the indigenous versions, the oldest mention of the use of this fruit is in the book of Garcia Da Orta by Dimas Bosque, physician to Dom Constantino, the Portuguese Viceroy to India in the 3rd quarter of the 16th. century. He relates that in the battle of Jafanapatam, the army was sickened with dysentery, and after his own supply of medicine was exhausted, he was forced to try experiments with Marmelos, and cured all his cases with a marmalade of this fruit. In 1853 Sir B. Martin wrote about the usefulness of this fruit in the Lancet. Manson-Bhar recommends the fresh fruit for the treatment of sprue, even the dry fruit is said to be useful. It is of greater use in the chronic stages of diarrhœa and dysentery, particularly bacillary dysentery, where probably it helps by relieving constipation.

The difficulty of obtaining Bael in England is said to have led to the substitution of it by Mangosteen, the fruit of Garcinia, a Mangostana.

Chemistry

Fluckiger and Henbury are of opinion that the dry pulp of the fruit contains chiefly macilage and probably pectin; whilst the conclusions of Henry and Brown are that it owes its activity to tannins. Latest work is by Dutt and Dikshit (1930). The roots, leaves, and bark were found to contain sugar reducing substances and tannins mainly. The fruit pulp yielded in addition to the usual substances a body called Marmelosin, in the following process.

Peteroleum-ether extract of the fruit is 3·8%; almost colourless and from it long colourless needles separate out. This crystalline substance is re-crystalised from dilute alcohol as colourless neddles. Melting point is 103. A trace of it separates out on standing from the benzene extract, as well. It is only soluble in alcohol and ether.

The seeds when crushed and extracted with petroleum-ether give a light yellow oil which has been found to posses very good purgative properties when taken internally in doses of 1·5 G.

Pharmacology

The animals used for experiments were mostly dogs, and the average weight was 10 kilos. Frogs and guinea-pigs were also used. The anaesthetic employed was morphine 5mg. urethane 1·8g. per kilo. of body weight. The anaesthesia was always deep. The injections of the drug were all intravenous into the femoral vein.

An alcoholic solution of the drug was employed, Marmelosin was supplied by Dr. Dutt of Allahabad University.

Ext. Balae. liq. was obtained from the market, it was evaporated on the water bath, and re-dissolved in normal saline.

The taste of the drug in alcoholic solutions is bitter.

Its average toxic dose for frogs is 1½ mg. per 100 g. B.W.

Vascular system: With smaller doses, as 1mg. per kilo B.W., there is no rise in B.P. Higher doses from 2 to 3 mgm. give a rise of 10 mm. only. If the drug is injected quickly, the rise is preceded by a slight initial fall. Doses higher than this give no rise in B.P., but make it irregular. In case of lethal doses which are from 4 to 5 mg. per kilo B.W. and upwards, there is a sudden fall in B.P.: the heart stopping to beat, before the respiration fails.

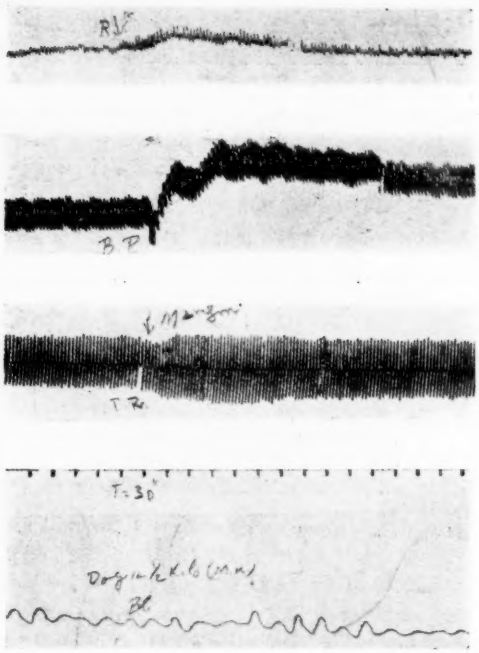
Frog's isolated heart is stimulated with dilutions of 1: 1,000,000, it relaxes and contracts better. Higher concentrations as 1: 100,000 depress the heart after a slight transitory stimulation. The rate and amplitude are both affected. There is incomplete relaxation and a weaker contraction; the effect is more marked on the auricles than the ventricles.

The isolated heart of guinea-pigs is depressed with a dilution of 1: 100,000 but the effect passes off on washing away the drug. A concentration of 1: 1,000,000 improves the systole of the heart.

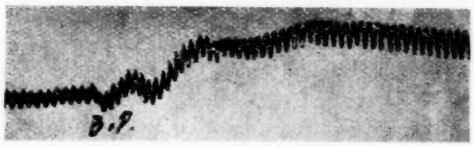
The intestinal and the renal volumes increase, corresponding to the rise in the B.P.

Alimentary system: Frog's isolated stomach passes into a state of partial tonic contraction with loss of peristaltic movements, but returns to normal after about 5 minutes. Intestinal movements were recorded in the following manner. A finger stall is connected to a glass tube by means of a rubber pressure tubing, and filled with water; a cut is made into the intestine and the finger stall pushed in. The cut is stitched around the rubber tube, and also the abdominal incision similarly. The other end of the glass tube is connected to a tambour for recording. The peristaltic movements of the intestine are inhibited on an injection of Marmelosin, whilst the tone is slightly and gradually increased, till the peristalsis returns. The Liq. Ext. has also got a similar action, though less prolonged than that of Marmelosin. But similar high doses are required to produce this action as in the case of B.P. The action does not change after cutting both vagi, or atropinising the vagal endings, or paralysing the sympathetic with ergotoxin.

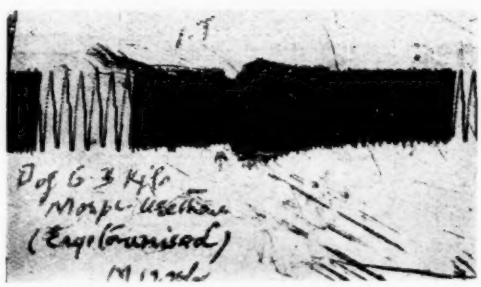
The increase in the intestinal volume with rise in the B.P. also points toward inhibition of the intestinal movements.



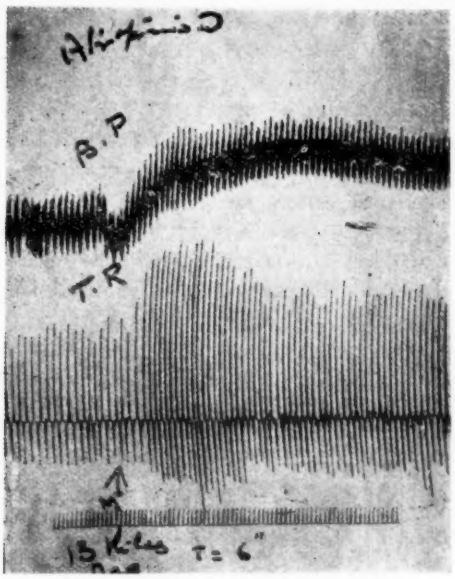
Graph I.—Dog weighing 12½ Kilo. Morphine-urethane an aesthesia, rise in blood pressure (B.P.), increase in renal volume (R.V.), no action on the bladder (bl), broncho-constriction (T.R.).



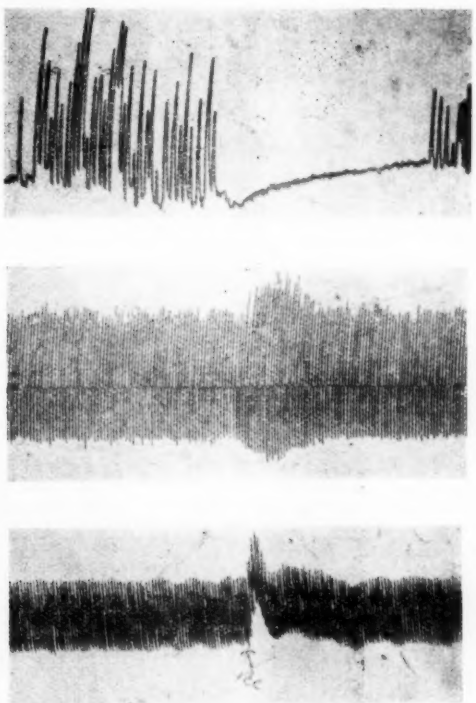
Graph II.—Action after cutting the vagi



Graph IV.—Action after paralysing the sympathetic.

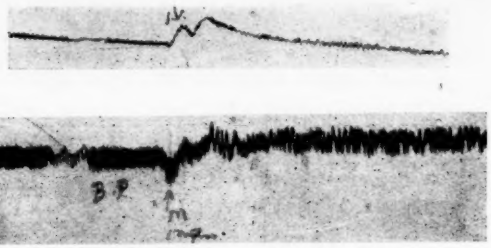


Graph III.—Action after paralysing the vagi.

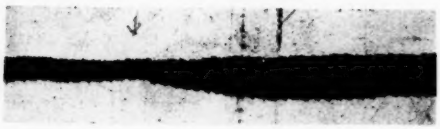


Graph V.—Action of the Ext.
Inhibition of the peristaltic movements, slight broncho-constriction, and a not very appreciable rise in the B. P.

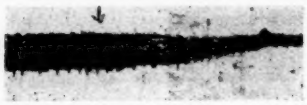
Graph VI.—Action of the Marmelosin on the intestine, similar to the above.



Graph VII.—Rise of the (i. v.) intestinal volume along with the rise in B. P.

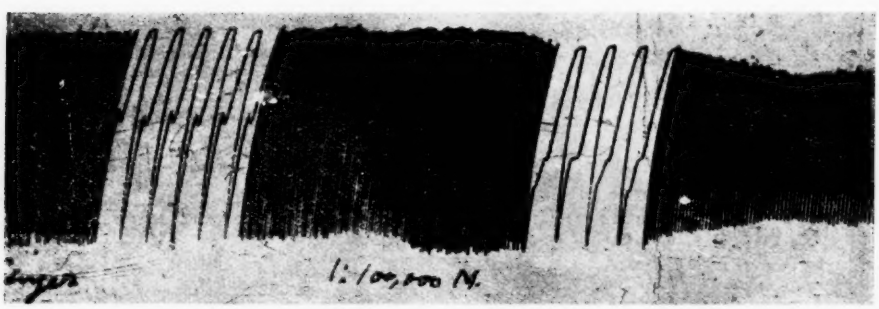


Graph VIII.—Isolated heart of the G. P., stronger systole.



Graph IX.—Isolated heart of the G. P., depression.

Graph X.—Isolated heart of the frog, dilution 1:2,000,000, improved systole and diastole.



Graph XI.—Isolated heart of frog, transitory stimulation is followed by slowing of the heart, a weaker contraction and incomplete relaxtion.

Respiratory system: There is invariably slight broncho-constriction, both with Marmelosin and and the Liq. Ext. But this is more transitory than the rise in the B.P.

Genito-urinary system: Kidney volume increases passively with rise in the B.P., but the urinary secretion is not affected.

The uterine movements of the virgin or parous uterus, *in situ*, are not affected in any way.

Further clinical and laboratory work is in progress.

Summary and Conclusions

Marmelosin is a very weak drug pharmacologically, for very large doses are required to produce any action on any organ.

The action of the drug is directly on the muscular tissue.

The actions of the Liq. Ext. of Bael and Marmelosin are quite similar. The inhibitory action of Marmelosin on the peristaltic movements of the intestine can help to check those cases of diarrhœa, where it is due to excessive stimulation of the motor activity. The increase in tone is very slight to be of any consideration. But the facts, that the amount of Marmelosin in Bael is not much, and very high doses of the drug are required to produce an action in experimental animals, leads to concluclusion that it plays little or no part in the therapeusis of Bael. At this stage we can only say that the action of Bael in diarrhœa and dysentery must be due to lot of mucilage and tannins present in it, which can be of help in treating irritable colons.

The opinion of Henry and Brown (1923) previously has been that the action of Bael is due to the abundance of tannins in it*.

References

Henry and Brown: Trans. Royal Soc. Trop. Med. & Hyg. Vol. xvii, P. 378. 1923.

Dutt and Dikshit: Jour. Ind. Chem Soc. Vol. vii, P. 759. 1930.

R. N. Chopra: Indigenous drugs of India, United States Dispensatory 1918.

* Paper read at the Scientific Section of the IX All India Medical Conference, held at Lucknow, in December, 1932.

A Simple Treatment of Haemorrhoids

By PASHESHER LAL KAPUR, M.D. (Berlin)
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Surgery is, as a rule, dreaded by the public not only because the knife is painful but because the after-effects and the complications are more agonising. So it is the duty of a surgeon to make his craft as painless as possible. The old barbers used to apply some ointments for painless healing of the wounds. Some of these so called barber-doctors profess to be experts in taking out piles by medicines which they apply locally and as the result of which, they say, hæmorrhoids fall down by themselves like plums from a tree. Hydro-therapeutists suggest water baths, modern surgeons operation of some sort, such as ligature, ligature and cautery, removal of the piles-bearing area (Whitehead's operation) or injections or coagulation by electricity. These operations, except the injections, are usually performed under deep general anæsthesia, and there is no special preparation of the case except administering castor oil at night and an enema the next day. The post-operative treatment is generally like that of a simple wound, which in this case is very painful and takes long to heal. Apart from the severe pain and occasional use of a catheter, there may be complications like loss of sphincter control, contraction of anal canal, tag formation, hæmorrhage, abscess formation, fistula and ulceration. In order to avoid these complications, injection treatment is suggested but this is meant for internal piles only and is contra-indicated in the presence of fissures, fistulæ, rectal polypi and inflamed skin tags (Morley). Coagulation by electricity, being a

most modern method, is being tried in many places. Bigger piles are rather dangerous to coagulate as some of them are liable to bleed profusely.

In order to lessen the pain and avoid all post-operative complications, and when contra-indications for injection treatment are present, I combine modified LANGENBECK'S operation with hydrotherapy of COUE.

TECHNIQUE

When a patient is admitted, he is made to lie down for at least three days. During this period he is given liquid diet and no fruits. In order to prevent the passage of stools 15 minims of tincture opii are given three times daily irrespective of meals. Further, he is made to sit in water (in summer, tap water and in winter, warm water) for at least one hour in the morning and one hour in the evening daily. After this preparation for three days all inflammation, if any, generally subsides. The patient is now ready for operation for which the bowels are evacuated in the usual manner by giving castor oil in the night and an enema the next morning. If the patient still complains of pain he is made to sit in water as explained above for one hour before the operation. The patients who have lost much blood require no such elaborate preparation (KULENKAMFF). If some inflammation is still present at the end of this preliminary treatment, hip-baths are to be continued till the inflammation subsides.

No general or spinal anaesthesia is required. Ordinary anal aneasthesia with 0.5% novocain solution suffices. The requisites for anaesthetizing the anal region are BRAUN'S optima metal syringe and a fine needle $0{,}50 \times 25$ mm. and a bigger needle $0{,}60 \times 45$ mm. Two points are taken, one on each side of the anus about 1½ finger away from the anal canal. At each point the 0,5% novocain solution is injected with the small needle till a small bleb is formed. Then the bigger needle is inserted horizontally in the direction of the sphincter muscle till some resistance is felt. This resistance is offered by the sphincter. About 50-60 cc. of the novocain solution are now injected and a little of it is injected in the subcutaneous tissue also. The same is done on the other side. After a few minutes the sphincter is relaxed and can be stretched and burnt or cut as required without any pain (BRAUN, WATSON and others).

OPERATION

The piles, whether internal or external, are clamped and cauterised with thermocautery or ordinary red hot iron (HIPPOCRATES). A continuous suture of catgut No. 0 or No. 00 is passed through the clamped pile and the clamp is loosened. Prolapse, if present, is incised a little, burnt and stitched; skin tags are similarly dealt with. After finishing the operation a small rubber tube wrapped in a piece of gauze and soaked in boric ointment with 1% clauden powder is inserted in the anus.

Half a grain of morphia and 1/100 grain of atropine sulph. is injected immediately after the operation and is repeated later when necessary. Sometimes the patient complains of pain for about ½ an hour or so and it is relieved by morphia. The only complication, I come across, is retention of urine which is however relieved by the application of heat over the bladder. In one to two per cent of the cases catheter has to be used.

On the next day the tube is taken out. The clauden boric ointment is applied daily till the fourth day when castor oil enema is given. This produces a fairly soft and easy motion. Up to this time the diet remains simple, mostly liquid, and tinct. opii in 15 minim dose three times daily is continued, so that the passage of stools is stopped. After the enema there is a slight pain and a sensation of some heaviness. No sooner has the enema worked than the patient is given a hip bath for one or two hours. This relieves the pain. Instead of clauden, 1% of anaesthesin boric ointment is applied. If the pain continues after the hip-bath and the application of ointment, heat is applied. The wound heals by the seventh or eight day when the patient can be discharged. After the castor oil enema the patient is put on mixed diet. Some sort of oil or liquid paraffin is given every night. Hip baths are to be continued for at least three months but the frequency and duration are reduced gradually.

With this method the dreaded agony is decreased to its minimum. It needs no special operation theatre and elaborate sterilisation. Every, practitioner should be in a position to do this operation in patient's home, if necessary.

Illustrative Cases

Case No. I. Mr. V. D., 30 years, suffered from bleeding piles for 6 years. Bleeding profuse and frequent, pain after defaecation, severe itching. Pulse feble 120 p.m. Respiration shallow, 22 p.m. temperature 97°F, and hæmoglobin 32%. Locally a small prolapse, 6 external piles and 3 internal piles which bled at the time of examination and a fissure was visible.

Immediate operation recommended but patient was afraid of chloroform. Treatment adopted: clauden tampon applied immediately and patient was carried to operation theatre.

Anal anaesthesia was induced as described above with 0,5% novocain solution. The sphincter was stretched and the fissure burnt. Piles were clamped, incised and cauterised and stitched with a continuous suture. Prolapse was incised in a ring stitched. A small rubber tube covered with a piece of gauze and soaked in 1% clauden boric ointment was inserted in the anus and the usual dressing was applied.

On the 4th day enema was given. Immediately after defaecation, the patient was given a hip-bath with ordinary tap water for one hour. After that anaesthesin ointment was applied. The same treatment was continued for a week and the patient was allowed to go home as fit for light work.

Case No. II. Mrs. H. M. aged 28, married, never menstruated, complained of bleeding per rectum every month. Pain after defaecation for at least 6 hours. Severe depression and neurasthenia.

Examination: One $\frac{1}{2}''$ long fissure, sufficiently deep and very tender, a skin-tag highly inflamed, there were four piles; two being internal.

Treatment: Patient was made to take hip-baths and tinct. opii thrice daily as described above. On the 3rd. day after admission operation was performed under anal anaesthesia as in case I and after treatment was carried on similar lines. She went home on the 9th day, fit for light work.

Case No. III. Mr. P. S., pain after defaecation, duration 5 years. Patient was in great agony and came for hypnotism. Further, he wanted a sphincter incision as this method was suggested to him.

There were 2 deep fissures and one $\frac{3}{4}''$ long skin-tag.

Treatment: After preparation for 3 days the patient was hypnotised. As the sphincter did not relax under hypnotism it was infiltrated with 0,5% novocain solution to induce anal anaesthesia. The skin-tag was incised, the sphincter was stretched and fissure cauterised.

After the usual after-treatment for 9 days the patient was discharged with instructions to rest for 5 days more after which he could go out for walks.

Case No. IV. Mr. T. S., fissures which had been operated upon 3 times. His surgeon got tired of him and suggested sphincter incision.

There were two fissures $\frac{1}{4}''$ & $\frac{3}{4}''$ long respectively, and there were two small internal piles. After the usual prepartion for 2 days the patient was operated upon under anal anaesthesia. The sphincter was stretched and the fissure cauterised. The internal piles being very small, were left alone. After the usual after-treatment for 10 days, the patient was discharged as fit for light work.

Case No. V. Mr. S. D., purulent discharge from anal region, occasional bleeding after defaecation. Pus was regular annoyance to him.

Local condition. A fistula blind but sufficiently deep, and five big external piles. Preliminary treatment was as in case of piles.

The fistula was infiltrated with 0,5% novocain solution and anal anasthesia was done. The fistula was excised as completely as possible and the piles were removed in the usual manner. The after-treatment consisted of enema, hip-bath, and ointmented dressing to the fistula as usual. Patient was discharged on the 15th. day with a slight wound in fistula region but he was allowed light office work.

I am highly indebted to Major Amir Chand for some useful suggestions and to Dr. Bhagat Ram Khanna for kindly referring the piles cases to me.

References

Morley: Hæmorrhoids.

Langenbeck: Bier, Braun, Kümmel's Chirurgische Operationslehre.

Reichel: Nachbehandlng nach Operationen.

Braun: Local Anaesthesia.

Watson: Hæmorrhoid Operations.

A local anaesthesia technique:
New York M.J. 1913, p. 755.

The Health of School Children in the Lucknow Municipality

By MOHAN LAL, M.B., B.S., D.P.H.

School Health Officer, Lucknow.

The Public Health Department requires the boys of the English Teaching Institutions to be examined in detail and a medical history sheet is maintained for each student.

TABLE I.

Number of Institutions		Students
Primary Schools ...	67	8420
Middle Vernacular Schools ...	3	
English Teaching Institutions	20	6510
Boy's Normal Schools ...	1	89
	Total	15019

Table 1. shows that 6599 students were on roll in the English Institutions allotted for detailed examination. Out of these 6355 students were actually examined.

Boys of the Vernacular Schools have to be examined in "Ordinary" and their history sheets are of a simpler type. Only 379 students could be examined.

The percentage of scholars examined was 94%.

The results of medical inspection of 6355 students are given below:

TABLE II.

Good Nutrition	1320	i.e.	21%
Fair Nutrition	4447	,,	69%
Poor Nutrition	500	,,	10%
Carious Teeth	280	,,	5%
Pyorrhoea	145	,,	2·3%
Enlarged Tonsils and Adenoids	608	,,	10%
Mouth breathing	815	,,	13%
Trachoma	1020	,,	16%
Defective Vision ... ... (below normal)	1501	,,	24%
Middle Ear Disease ...	52	,,	1%
Defective Hearing ...	116	,,	2%
Tuberculosis { Pulmonary ...	2	,,	
Tuberculosis { Osseous ...	1	,,	
Heart Disease (Organic but compensated)	17	,,	
Enlargement of Spleen ...	138	,,	2%
Infectious Diseases	57	,,	0·9%
Polypus Nose	10		
Osteosis (Familial) ...	1		
Goitre	24		
Cretins	2		
Benign Tumour in Antrum of Highmore	1		
Epilepsy	5		
Jaundice	7		

There was an epidemic of jaundice in Lucknow last year and 25 students of the Medical College were affected.

About 62% of the scholars in the English Teaching Institutions were found defective.

The number of scholars with one defect was	2222	i.e. 35%
The ... ... two defects	1111	18%
The ... three to six defects was	574	9%

The chief prevailing defects detected were:

1. Uncleanliness.
2. Malnutrition.
3. Trachoma.
4. Defective vision.
5. Mouthbreathing.
6. Enlargement of tonsils & adenoids.
7. Carious teeth.

It is a matter of importance to know what can be done for them:

More than one method have been adopted to approach this question.

1. Tickets are issued to the guardians of the boys found to be suffering from ailments:

White tickets for walking patients.

Green tickets for eye diseases and defects in vision.

Red tickets for infectious diseases.

Blue tickets for bed patients i.e. students who need rest at home for treatment.

These tickets are taken to public hospitals or private practitioners and after treatment these are returned to the heads of the institutions who present these to the School Doctor on his next visit.

2. Establishing school clinics for constantly watching their health. In Lucknow three centres have been formed for such clinics:

i. at the Medical College,
ii. at the Balrampur Hospital,
iii. at the Hazratgunj Dispensary

I myself go to the Balrampur Hospital every Saturday and examine and treat the students. The Ophthalmologist treats eye cases and prescribes glasses. 14 operations were performed last session in the Balrampur Hospital.

To convince the guardians I call them at my place and explain the importance of immediate treatment. In most of such cases the guardians have followed my instructions. To quote one instance, I may mention the case of a guardian who is a professor in the Lucknow Christian College. His youngest son was found to be very lean and thin and sickly. I excluded the boy from the school and called the father to my house. On taking the history of the case I came to know that the mother of the boy was a tuberculous patient. After great persuasion I could induce the guardian to withdraw the boy from the school. I examined the eye sight of 40 students at my place and treated 30 cases of other diseases last session.

The School Health Officer attached to the Government Schools and Colleges attends the children. For the other hostels, the Education Department, with the concurrence of the Inspector General of the Civil Hospitals, has appointed medical officers.

Difficulties are many. Chief of these are:

(1) The guardians of the children are often very negligent about the health of their wards. Numerous cases requiring urgent and efficient treatment are left untreated and uncared for. They do not appreciate the benefit of prophylaxis. There actually occurred such a case. A boy had very bad carious teeth. The guardian was advised to get the teeth filled up, but to no effect. After ten days he surprised me by his sudden appearance at my place and presenting the boy before me with a very big gum-boil. Then he carried out all the instructions but at the cost of more money and time.

(2) Ignorance of the guardians regarding the importance of prevention of the ailments of the school age.

(3) Want of a suitable treatment-centre only for the school boys so that the cases may be followed up till the end. The hospitals cannot afford to attend to the large number of boys requiring treatment without increasing their staff which is impossible.

(4) Want of taking effective measures by the Education Department.

(5) Poverty of the guardians in certain cases. Private contributions were raised for buying glasses for two fatherless students.

(6) Lack of interest of the Heads of institutions and the teachers. If they frequently urge the guardians to get their wards periodically examined, then in many instances diseases and defects can be prevented.

What is desired?

The improvements which are necessary may be briefly mentioned:

1. A hospital for school children. If a contribution is raised from over 6000 students at the

rate of an anna per head the total comes to Rs. 375/- per month. This much will be quite sufficient to meet the demands of the children. In very near future such a scheme is going to be brought into shape.

2. Co-operation of the education authorities.

3. A system of school feeding to provide meals for children whose parents are willing to pay and for needy children free of charge.

4. Provision of glasses for children, who need them.

5. Introduction of corrective exercises for mouth-breathing and defective postures. This I have started in some of the schools.

6. Educating the guardians who in their turn will look after the habits of their wards. A move has already been made in this direction. A circular has been issued from the office of the Inspector of Schools to the effect that scholars coming in dirty clothing should be immediately sent away.*

* Paper read at the Scientific Section of the IX All India Medical Conference, held at Lucknow, in December, 1932.

Distribution of Lactate between Blood corpuscles and Plasma in Pernicious Anaemia Patients

By S. C. DEVADATTA.

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Lactate in mg. per 100 c.c.

Blood	Plasma.	Corpuscles.	Corp /plas	Haematocrit C : P
22·4	19·4	29·0	1·5	13 : 87
19·4	19·3	20·8	1·1	29 : 71
13·5	11·0	16·5	1·5	12 : 88
	21·5	23·5	1·0	30 : 70
22·7	23·2	23·6	1·0	14 : 86
33·2	32·2	36·8	1·1	23 : 73

In the case of anaemic blood, where the percentage of corpuscles is as low as 14 to 20 per cent, the corpuscles have a higher concentration of lactate than that of plasma. This is an interesting reversal of the normal condition (0.75).

The presence of substances in the blood stream which are capable of weakening the corpuscular membrane may be responsible for this higher concentration of lactate in the corpuscles : if so, a similar increase in the concentration of other ions should be present. Therefore a complete analysis of the corpuscles is desirable.

It was observed that when the blood from these patients was allowed to stand in the tubes, the corpuscles settled off within a few minutes, very much more rapidly than do those of normal blood ; the suspension stability is reduced. It would be interesting to study whether this is due to pseudo-agglutination or increased permeability of the cell membrane.

DAVIDSON and GULLAND in their book on Pernicious Anaemia, state that the mean diameter of red blood corpuscles in pernicious anaemia is about 1 μ larger than the average diameter of the red blood corpuscles in normal people, *i. e.* 10 per cent larger. It has been shown clearly that the haemoglobin, as a buffer, is responsible for the concentration of lactate in the corpuscles. The corpuscles in the blood of primary anaemia patients being 10 per cent larger with colour index more than one (corresponding 10 per cent increase in haemoglobin) may possibly be capable of buffering more lactic acid than the corpuscle in the blood of normal subjects. This may be the reason for high lactate ratio C/P (1.0) observed in the blood of anaemic patients. *

* Proceedings of the Physiological Society, June 11, 1932. Journal of Physiology, Vol. LXXV.
(Original paper is in the press in England.)

Modern Proctology

By SURESH CHANDRA DAS GUPTA, L.M.S. (Cal.), M.A.C.Pr. (U.S.A.),
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Diseases of rectum are very common maladies. DR. P. LOCKHART-MUMMERY roughly estimates that "nearly 50% of the population suffers from rectal diseases during some period of their lives," while DR. C. E. BLANCHARD (of U. S. A.) gives a lower percentage. He says "Twenty per cent of our people have piles." In India, I presume, rectal disease is much less on account of less consumption of meat and wine.

Proctology has, of late, become a very important subject and can be considered as much a speciality as Gynaecology, Ophthalmology, Dentistry, Urology and Diseases of Ear, Nose and Throat. It must be recognised now as legitimate speciality, and we should strive our best to give this branch of Medical Science a definite status. MUMMERY also hopes that "time will soon come when no teaching staff will be considered complete unless it includes a Proctologist on its special staff." In America before DR. MARTINS, Proctology was not recognised as a special subject. To him and his contemporaries MITCHEL, AGNEW, ANDREWS, DE VILBISS, BRINKEROFF, MATHEWS, TUTTLE, PENNINGTON, GANT, HERSCHMANN we owe conception and growth of Modern Proctology; while in England CHARLES BALL, WHITEHEAD, GORDON WATSON, DUDLEY, WRIGHT, MUMMERY and MORLEY have added much to our knowledge, and last of all, works of Profs. SOMENBERG VOLKER, BONHEIM and STRAUSS of Germany are also worthy of mention.

GANT, ALBRIGHT, MUMMERY and BLANCHARD have so simplified the treatment of most of the diseases of rectum and anus under local anaesthesia that now a majority of proctologic works can be conveniently done in office or at home. On account of the growing "labour and bread" problem I can with some confidence say, that in future, most of the surgical operations under general anaesthesia would be replaced, as far as possible, by ambulant methods. It is as BLANCHARD observes, "the natural and speedy evolution of art." Ambulant Proctology means proctologic works by ambulant or walking methods. There are failures also in the radical operation of piles etc., but the operation is so painful and the after-treatment so tedious, that there will be few amongst them to undergo a second operation under general anaesthesia.

Rectum is the lowest segment of the intestinal canal rather the "postern gate of human citadel—the sewer outlet." But still the surgery of this part is very important and should not be neglected at all.

Before discussing the diseases or pathological physiology, I would like to say a few words about the special anatomy. Rectum extends from anus to the sigmoidal juncture at the O'BEIRNE'S sphincter. It is usually six inches in length and longer in men than women. It is narrowest at anus and sigmoid. The lower three inches of the sigmoid is surrounded by peritoneum and was formerly described as the upper portion of the rectum. The middle portion which is called ampulla is movable and covered by peritoneum only on the upper part of its anterior surface. This portion has three valves (HOUSTON'S) due to the infolding of the rectal tunics. The lowest part is the anal canal, and has no peritoneal covering, which measures about an inch and a half and is fixed.

Lesions in the ampulla are few only and are less sensitive. Usually stricture, prolapse and growths (specially malignant) occur in this part. The lower part of the ampulla or rather the upper part of the anal canal is in reality the pile-bearing area. Lesions in this lower part are numerous and more painful than those of the upper rectum. According to DR. S. G. GANT 80 p. c. of the ano-rectal diseases such as haemorrhoids, fissures, fistula, hypertrophied papilla, inflamed crypts etc. are met with in the lowest part of the rectum.

Just above the anus we have the so-called white line (which is rarely so in a living subject); it is known as HILTON'S Line at the junction of internal and external sphincter muscles—just above the muco-cutaneous juncture. Above the white line there are 5 to 10 longitudinal plicae or folds known as Columns of MORGAGNI, and between them and the white line there are again to 14 minute elevations. They are called anal papillae and are special rectal sensory structures. The feeling of defaecation comes on as soon as faeces reaches that sensory area. In between the papillae the semilunar valves or crypts stand, and in these crypts or pockets mucus is collected for lubrication of the faeces during defeacation.

HOUSTON'S valves (usually 3 in number) are situated above the anal canal, and are sort of spiral stair-way, that rotates and temporarily retards the motion of faeces in their passage to the anal canal. They are frequently the site of stricture, and when hypertrophied cause constipation.

Anus is the termination of the anal canal, and its size is modified by disease. It is smaller than natural and tightly closed when there are fissures and ulcers, and large and patulous when the muscle is paralysed, or there are piles, polypus, prolapse or fatigue on account of frequent motions and so on.

The recto-vesical pouch extends about 4 inches above the anus—which fact is of importance in the excision of rectum for malignancy.

Nervous system has also an important bearing on the symptoms, diagnosis and treatment of rectal diseases. Throughout the intestinal musculature with the exclusion of the sphincters, the spinal parasympathetics stimulate and sympathetice inhibit peristalsis, but in case of the sphincters, the sympathetics stimulate and parasympathetics inhibit. The rectum is supplied by sympathetic nerves from mesenteric, sacral and hypogastric plexus, and also 2nd, 3rd, 4th and 5th sacral nerves which have both sensory and motor fibres—closely related with off-shoots of the sympathetic fibres. There is close relation between centres for controlling ano-rectal and genito-urinary regions; when the spinal centre is injured there is incontinence of both urine and faeces.

The part above pectinate line and the posterior part of the anal canal is richly supplied by sympathetic nerves, while the portion below the papillae and also anterior part of the anal canal are supplied by sacral (parasympathetic) nerves. The lesion above papilla and post anal part stimulates the sympathetic nerves which cause reflex contraction of the sphincter muscles of the anus; while on the other hand lesion below the line and anterior part of anal canal stimulates the parasympathetic nerves which cause relaxation of anus by inhibiting the sympathetic nerves. (POTTINGER). It is also very important to know that the sensory nervous system ends just above the pectinate line, i.e., to say, there is little sensation of the rectum above the papilla, So that injections can be safely given there without the patient knowing or feeling any pain whatsoever.

The lymphatics of the anal marginare carried over to the inner inguinal glands, and those above the HILTON'S line drain in the ano-rectal and prevertebral nodes. If the rectum proper be the seat of malignant growth, there is no need for the removal of the inguinal glands.

As regards manifestation of the ano-rectal disease, GANT enumerates 41 signs of which the most important ones are the following: pain, haemorrhage, discharge, protrusion, itching, tenesmus, contracted or relaxed anus, marginal skin-tags, constipation, obstipation (*i.e.* constipation by mechanical obstruction), exhaustion, burning of the rectum, excrescence of the mucosa and so on.

DR. EUGENE CARMICHAEL (The Bulletin of Ambulant Proctology, May, 32) asserts that there are 2 sorts of constipation—one is spastic, the other—inhibitory. The former variety is due to inflammation (*e. g.* appendicitis), low anterior piles, cryptitis, inflamed papillae, the result is increased motility of intestines and relaxed sphincter The latter is due to abscess, syphilis, high piles, buried fissure (deep anal sinus) etc.

the result being diminished glandular secretion and peristalsis and contracted anus. According to CARMICHAEL, 90 p. c. of the cases of constipation of the above 2 types can be cured by rectal treatment. He prescribes bland diet for spastic constipation, and roughage diet for atonic (inhibitory) variety.

No other disease has such depressing symptoms as the diseases of rectum exercises on the human nervous system. DR. CARMICHAEL had made admirable researches (The Journal of American Proctology, Sept. 32) on the reflex action of anal lesions. He asserts that an irritable pile in the anterior anal zone causes irritation of bladder and frequent urination, especially at night; while one in the posterior quadrant causes griping pain in the stomach when empty. Anterior itching comes from inflammation of anterior crypt and posterior itching comes from the posterior crypt. Buried fissure is the most potent anatomic cause in the body for nervous tension and nervous exhaustion. Buried fissure or pile in the posterior area causes sleeplessness. He calls such a pile as "sleepless pile"—causing insomnia. He cured sleeplessness by treating the affected pile several times. Piles, slight prolapse above pectinate line, and buried fissure may cause backache also.

Internal haemorrhoids are the only true piles—the most common affection of the rectum piles are not now looked upon as a mere local disease, but an outcome of the derangement of liver, intestinal fermentation, and other digestive abnormalities. DR. BLANCHARD does not count piles by number, but describes the condition as "loosened redundant and atonic rectal mucosa with more or less varicosity of the veins contained in it" which he terms as "pile masses". Internal piles develop from chronic colitis or proctitis which blisters the mucosa. In reality the condition we call "hemorrhoids is one of the prices" says BLANCHARD, "we pay for our modern civilization", besides, our upright gait, superior hemorrhoidal veins without valves and consequent blood stasis, irregular habits, bad diet, constipation and straining etc. are exciting causes. Often the so-called cases of protruding piles are examples of prolapsed mucosa.

Surgical operations were done under a general anaesthesia, it was afterwards performed under local anaesthesia, and now, more or less substituted by methods of injection. DR. BRADY says "Modern treatment of injection is infinitely safer than very best surgical treatment". DR. MORLEY also states "I am convinced that operation is rarely necessary and that the condition may be dealt with as satisfactorily and as safely by methods of interstitial injection, thereby saving the patient from lying up, and sparing him considerable pain, inconvenience, and expense".

In my humble capacity as a surgeon I did innumerable operations on the rectum and anus every year for last quarter of the century, but since I met DRS. LOCKHART-MUMMERY and BLANCHARD and had the honour and privilege of working together about 5 years ago, I have changed my opinion and nearly abandoned operations in my hospital. I have been treating young and old patients for rectal diseases by ambulant methods during bleeding and in the interval. One single injection, if properly placed, will stop or at least reduce bleeding and give immediate relief.

There is no good in excising any of the rectal veins, because if done there may be scar tissue causing stenosis or return of pile in a new area (BLANCHARD). The late SIR JAMES GOODHART

Piles before injection treatment.

was of opinion that "operation for haemorrhoids was an unnecessary, barbarous and dangerous

Piles after injection treatment.

procedure which the treatment by interstitial injections ought to replace entirely".

In this short essay it is not possible for me to deal with the treatment of all rectal diseases in detail. I shall only discuss the principle of treatment for the very commom diseases of rectum and anus,

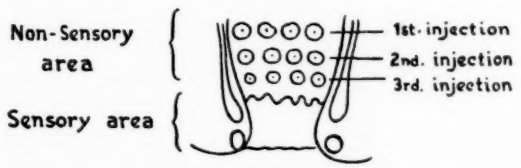
In diagnosing a case of rectal disease you must in the first place look minutely at the anal aperture ; if you find the circumference rugose or excoriated, or protrusions, sentinel piles, skin tags or a thrombotic mass, or even a small and apparently blind nodule, the remnant of an old fistula, you can presume that the patient is suffering from some sort of rectal disorder in 75 p. c. cases. If you stretch the protruded margins with your both thumbs, you will most probably notice some reddish masses in the longitudinal direction. Next, you push your lubricated right index finger gently inside, and feel with the palmar surface the mucous membrane, and by practice you know half of your business by these examinations. MUMMERY used to say, that he could count the piles by once rotating his finger in the rectum. I tell you emphatically that it is no exaggeration at all.

Theoretically, we divide rectum into 4 parts or quadrants, anterior (towards prostate), posterior (towards coccyx), right lateral (upper eara) and left lateral (lower portion) in relation to the 'left lateral SIM'S position' in which the patient is placed on the table with the hip resting on the edge and both feet close together. We have discarded the lithotomy position both for examination and treatment of rectal cases ; there is no need. Lastly, you do the examination by means of a speculum. There are too many in the market, almost every proctologist has invented or modified one. The bi or trivalve speculums often catch the mucous folds and are useless, and so are the so-called self-retaining ones. I like BRINKEROFF'S speculum as the best. It is tapering at end and has a slide in it, and can be rotated in any position without removing. Of course, the proctoscopes are very good for higher-up examinations in rectum or sigmoid. In introducing a speculum it is first dipped in warm lysol solution and lubricated and passed in by a gentle rotatory motion pressing upwards (towards the head of the patient) and then slightly backwards (against the promontory) and finally downwards towards sigmoid. If it would not go, ask the patient to make a "bearing down" effort, and this will help the introduction easily. You should always avoid pressing against the prostate in males and the os in females.

As for the syringe for injection we want one of a 5 c.c. capacity with a long needle of big bore (No. 18 to 22) and extension parts for higher injections. There should be an adjustable cannula to expose the needle to any desired length in order to guard the point against deep penetration.

Then, as for the injecting fluid, there are several varieties. DR. MUMMERY uses a higher strength (20 p.c. solution) of carbolic acid in glycerin and injects 2 to 5 min. DR. TURREL recommends aqueous solution of quinine and urea (5 to 7%)—dose 5 to 15 min. for a pile. DR. BLANCHARD uses a milder solution of 5 p.c. phenol in vegetable oil (almond, or olive) to which 20 grains of menthol per ounce are added. He calls this 5 p. c. P-O. and injects 2 to 5 c.c. of the fluid divided in 3 or 4 sites. I use this solution, and have found it quite safe and efficacious.

There are mainly 2 methods of injection : one is direct, and the other indirect or submucous ; but the principle is the same, *i. e.*, to produce slight local inflammation and consequent hardening, and then gradual obliteration of the veins. In direct method the needle is inserted into the base of pile tissue till the point reaches upto its centre, and 2 to 5 minims are then injected slowly avoiding veins. This is quite easy, but there may be slough. The other submucous method is very delicate and requires long practice and perseverance. In this method the injection is given just under the mucous membrane from ½ to 2 c.c. of the fluid. ALBRIGHT is the founder of this technique ; BLANCHARD has improved it. He discovered the "lifting" technique and the "striatin sign" to guide you as to the quantity you should inject in each pile, or pile mass. You have to insert the needle in a gliding motion. You have to do three things at one and the same time, namely, pierce, lift the mucous membrane and inject. Injections are given weekly, and should not be repeated unless the inflammation subsides (*vide* my article on "Haemorrhoids" in Sind Medical Journal, 1932 Vol. V, No. I, and also "Ambulant Proctology", in Indian Medical Record, Feb., 1930, for the details.) This injection is also very useful for all loose and wrinkled mucosa and in prolapse too. It tightens up the loose membrane by induced adhesions. You have to start at the highest part all round and gradually work below as shown underneath.



If a pile is found strangulated or gangrenous, it should be trimmed off at once. It is no good waiting for the clearing of sloughs. If the anus be too tight, it is best to divulge a bit then and there under ethyl chloride.

In case of internal piles, where there is marked infectious inflammation, you should not inject these areas, that are badly discoloured. If there is loose mucosa higher up, you can inject above pile-bearing areas. Irrigations of any astringent or antiseptic, followed by instillations of any suitable ointment are always necessary. Ulcers I always paint with 50% P-O, then follow with swabbing of alcohol. Butesin picrate ointment is a very soothing application after injection.

External piles are not true piles at all. They are always 'clot-piles' so to speak. The first thing to do is to get the clots out. Often there is much redundancy of the marginal skin and some anal protrusion. I take the whole thing right off under local anaesthesia with clamp and cautery, or if gangrenous, open, take them out and trim off the edges freely. For external piles, no matter how much inflamed, the first thing to do is to remove the clots, and then treat as you would any similar surgical wound. BLANCHARD emphasizes the necessity of removing the sac as well as the clot. Hot compresses may be given, but usually swabbing with tinct. iodine and benzoin (I-B solution) and a compress of glycerine of tannic acid is all that is necessary.

The other abnormalities are proctitis, fissure, fistula, hypertrophied and inflamed papilla, infected crypts, skin tags, polyps, pruritis and so on.

PROCTITIS is really the precursor of other rectal disorders. It is rather the result of chronic intestinal stasis, which by mechanical pressure and irritation, and sometimes infection, sets up a low grade inflammation. It is like cold in the head. The stool contains mucus and blood usually of chocolate brown colour. Rectal examination, both high and low, will elicit proper diagnosis. Treatment is more medical than surgical. Liq. petroleum is very good to ensure easy and regular action of bowels. Colon therapy is the development of the modern times. I think irrigation is better than enema. I use double-channel soft tube or two soft catheters (No. 12) at the time side by side—one to be connected with the douche can or funnel, and the other for draining the excess of fluid and reduce intra-intestinal tension. You can inject any antiseptic solution, pot. permang. (1 in 5000),

argent. nitras (½ gr. per oz.) argyrol or protargol (1 to 5 p.c.). Often warm water (100 to 110° F.) is soothing, but sometimes cold hazeline douche gives relief. MUMMERY recommends enema of weak gruel as very beneficial. "By far the best method" says MUMMERY of treating chronic proctitis at the present time is the introduction of drugs by electric cataphoresis."

FISSURE: Usually fissures situated anteriorly or laterally can be cured without operation, by application of an ointment. Posterior fissures are usually of the classical type. Long-standing fissures with hypertrophy of sphincter are best treated by divulsion or excision of external sphincter. Divulsion or forcible dilatation by use of trained fingers is not an easy task. Divulge until you see little blood, it is better to do less than to overdo it; and do it under ethyl chloride anaesthesia. If not successful, make an incision across its entire length and deep enough to divide about 1/3 of the fibres of the external sphincter. The sentinel pile which is usually present, should be removed at the same time. After operation or divulsion insert a morphia suppository. Sometimes indurated tissue must be cleaned away by gentle curettage. Swabbing with 50% P-P or I-B sol. is beneficial.

FISTULA: Larger percentage of the fistulae originates from untreated abscess, either perirectal, peri-anal or ischio-rectal. An abscess usually forms by septic absorption from infected crypts or lacerated papilla during passage of foreign body or hard feces. Many of them are tubercular, occurring by swallowing the T.B. sputum. They are very difficult to cure. BLANCHARD emphasises that the most important principle in treatment of fistula is drainage, ample drainage and more drainage than you think necessary. You can do the operation by local anaesthesia. All openings should be made radiating from the anal margin; 1/3 of the cut should be in the canal and 2/3 outside. (MUMMERY.) The edges should be trimmed away leaving a clean wound. BLANCHAD advises making "step incision," *i. e.*, by 2 or 3 steps in the ambulant method. The tubercular fistulae heal very slowly. 'Gauidol pack' is excellent, so also a combination of balsam of Peru and ichthyol.

Hypertrophied papilla, polypus, and skin tags are injected with 1% novocaine sol. at the base, and clamped and then excised off with scissors, and finally touched with hot point of the cautery to seal the incision. Cutting should be done in the long axis of the rectum. The same rule is true of sentinel piles. It is not always necessary to clamp a sentinel pile.

CRYPTITIS: Dull aching pain, heaviness in anal canal, itching and often hyper-secretion of mucus are the common symptoms. It is caused by hard stool, foreign bodies, seeds, fish bones etc. Their decomposition and irritation cause ulceration and often result in fistula. The condition can only be diagnosed by examination with speculum and probe. Irrigation of weak antiseptics and enema of warm olive oil to which ½ dram of bismuth subnitrate is added are beneficial. The surgical treatment is to lay open the pocket and allow to heal. Injection should be given at the base. GANT'S bivalve speculum is very suitable for operations on the rectum. The pocket is lifted with angulated probe or PRATT hook and removed with one snip of curved scissors from below upwards. Two weeks are necessary for healing. Some soothing ointments only are to be applied or introduced into the canal.

PRURITUS ANI: It is according to some proctologists due to infected crypts; but it is not so always. Of course, diabetes and portal obstruction are remote causes. It is often caused by "acrid acid exudate" that oozes through skin of anal region, which is the consequence of the presence of foreign fungi that ferment, resulting in the formation of acids and ptomaines. Local application of C. C. P. (equal parts of chloral, camphor and phenol), colon irrigation, saline purgatives, bland diet, cleanliness of local area are palliative methods of treatment. BALL'S operation for pruritus has several disadvantages and are obsolete now. GANT has simplified the procedure by his buttonhole operation. BLANCHARD'S method is easiest; he only makes buttonholes at each of the 4 quadrants for drainage; C. C. P. is applied and the wound is dressed with dry cotton.

Diet, Drink and Exercise: All our meals have an excess of starch, sugar and meat, the bulk-forming items are wanting; fermentation usually occurs. Therefore, you must cut down starch, sweets and proteins, and give more alkaline succulent vegetables both cooked and uncooked, and natural diet as far as possible, namely, unpolished rice, whole-wheat flour, brown sugar or better "gur", 'dal' with skin intact, green leafy vegetables such as lettuce, cabbage, celery, etc, in place of refined and concentrated foods. The citron fruits are useful. Water is a great solvent and helps elimination. Exercise is a valuable help in the diseases of alimentary canal; it stimulatess digestion, increases appetite and relieves constipation also. Out-door games such as riding, swimming, skating, even walking and gardening are quite useful and necessary. In one word let your each menu consist of more alkali-forming food than acid-forming ones. *

* Read at the Scientific Section of the IX All-India Medical Conference held at Lucknow, December 1932.

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Editorial Comments

Aschheim-Zondek Reaction of Pregnancy

The diagnosis of pregnancy without an examination of the genitals of the woman has always been the desire of medical men. As far as three thousand years back (1350 B. C.), medical men in Egypt tried to diagnose pregnancy by examination of the urine but their efforts were not successful on account of absence of modern scientific methods. Since 1911, however, when ABDERHALDEN first propounded his theory of pregnant woman's immunization against the placental protein, this study has assumed a scientific turn. Diagnosis of pregnancy thus resolved itself into a detection of the placental protein or the changes induced by it in the system. ABDERHALDEN tried to find it in the blood, subsequent workers tried it in the urine.

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In the year 1910, a Russian Doctor ISCOVESCO and afterwards a German worker, FELLNER tried to show, that the changes in the genitals of a woman are brought about by some special hormones, which were named sex-hormones. In 1917 STOCKARD and PAPANICOLAOU showed that sex-hormones caused a change in the vaginal mucous membrane of the guinea-pig during oestrus. Subsequently in America, LONG and EVANS found the same phenomena in rats and ALLEN in mice. It was these American workers particularly ALLEN, who brought the test to a perfection and thus laid the foundation stone of what is known to-day as ASCHHEIM-ZONDEK Reaction. ALLEN injected in castrated mice ovarian hormone and found typical oestrus changes in the vagina. ASCHHEIM and ZONDEK instead of taking castrated mice, took infant female guinea pigs and observed the same results. They also found that the sex hormones caused premature development of the uterus, tubes and vagina (*i.e.* parts developed from the Mullerian ducts) but had no influence on the ovaries. Their inquisitiveness prompted them to investigate whether there were other hormone or hormones which could stimulate growth of the ovaries. ZONDEK, however, afterwards found that when pieces of the anterior lobe of the pituitary were grafted in the infant guinea-pig he could induce the same changes in the vagina as are noticed by ALLEN in mice, and by ASCHHEIM and ZONDEK in infantile guinea-pigs. They worked for years till at least they found and established that the anterior lobe of the pituitary secreted some hormone which stimulated the ovarian functions, or in other words, the pituitary was the motor which drives the ovary. To these hormones they gave the name Prolan, and they subsequently described three of them. Prolan—A, which stimulated the growth of the primordial follicle till it is converted into a Graafian follicle ; Prolan—B, which gives rise to bleeding in the follicle and lutein formation ; and thirdly another hormone which regulates general growth and development of the body. We are here concerned with the first two only.

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Prolan A and B are normally present in the blood, but in so minute quantities that their detection in blood in non-pregnant state is extremely difficult. In certain conditions their production is so excessive that they are excreted in large amount through the kidneys and one finds then in urine a large amount of this hormone. In pregnancy the production and excretion are maximum and the detection of this constitutes the pregnancy reaction. The three reactions are :—

H. V. R. I.—growth of follicle and induction of oestrus,

H. V. R. II—bleeding in the follicle,

H. V. R. III—building of corpora lutea atretica with the inclusion of the ovum.

BORST, DÖDERLEIN and GOSTIMIROVIĆ have found parallel reaction on the testes of infantile male guinea-pigs.

The test is done in the following way :

The morning urine is collected in a clean vessel and filtered. If neutral or alkaline, it is made slightly acid and to every 25 cc. of urine one drop of Tricresol is added. It is then kept in a refrigerator. Five female infantile guinea pigs, of the average age of 4 weeks (3 to 5) weighing 6 to 8 grammes are taken. They are marked No. 1 to No. 5 with carbol fuchsin points. In 48 hours 6 injections of small quantities of urine are given to each of the guinea pigs as follows :—

g.p. I 6 x 0, 2 cc. - 1,2 cc.
g.p. II 6 x 0, 25cc. - 1,5 cc.
g.p. III 6 x 0, 3 cc - 1,8 cc.
g.p. IV 6 x 0, 3 cc - 1,8 cc.
g.p. V 6 x 0, 4 cc. - 2,4 cc.

After 96 hours from the begining of the experiment they are killed with coal gas and the abdomen opened. With aid of a simple lens one can nicely see the blood and lutein containing follicles. If there be any doubt as to the lutein formation the ovaries are examined microscopically. The H. V. R. II, and H. V. R. III only are characteristics of pregnancy.

* * * * *

Upto 1930, ASCHHEIM and ZONDEK tested this reaction on 11,000 guinea pigs ; and in 1300 pregnancy cases they had 98,1% positive results. This is the only biological test for pregnancy which gives a 99% positive result, and as early as 31st to 33rd day after the first day of the last menstruation.

* * * * *

The reaction is positive only when the products of conception are living. For not more than a week after the birth of the child or an abortion, or intrauterine death of foetus it is positive. In cases of extra-uterine pregnancy the test is most valuable. When a patient with a tubo-ovarian mass shows the positive test, one can be sure that the mass is a gravid tube or ovary. Moreover a positive test indicates that foetus is living and the patient may be saved the disasters of a ruptured ectopic. When on the other hand the test is negative, one knows that the foetus is dead, and can go on with conservative treatment. In some cases for a short time after death of the foetus the reaction may be positive. The test is also very valuable in the diagnosis and prognosis of hydatidiform mole and chorion-epithelioma. In these conditions the hormone excretion is enormous. After evacuating a uterus the test must be continually done for some time even after it has become negative. If it again appears then we know that chorion-epithelioma has developed and this early diagnosis influences the prognosis of such cases to a considerable extent.

* * * * *

The reaction is sometimes positive in cases of carcinoma growing anywhere in the body. We do not know as yet the relation between the anterior lobe of pituitary and cancer cells ; but recent investigations into the metabolism of cancer cells show that the anterior lobe of the pituitary has some influence on the growth of the cancer cells.

* * * * *

Further, these workers have opened a new line of Hormone therapy. Hitherto it has been the practice with the gynaecologists to treat all amenorrhoeas and 'menstrual trouble' cases with ovarian or thyroid extracts or both. Very often they failed because they were unaware that the troubles might be caused either by excess or in-sufficiency of the hormone in blood. A systematic examination of the blood and urine of such patients will now bring out the facts. Cases of infantilism and primary amenorrhoea, which do not react to the stereo-typed "Thyro-ovarian" products are now much more successfully treated by Prolan.

Participation of Government Medical Officers in the Indian Medical Association

Many of the members of the Indian Medical Association who are in Government service have from time to time been exercised in mind as to whether they are free to be members of this Association. While many of them who have been our members for a considerable time felt secure in their position, the Government of India have recently unearthed a clause of the Government Servants' Conduct Rules which has brought a great deal of perturbation to their minds. As the matter is under correspondence with the Government of India and while it is too early as yet to pass any comments on this subject, we would merely refer our readers to the correspondence published elsewhere in this issue. We sincerely hope that Government will withdraw any objection to its servants joining the Indian Medical Association in view of the reasonable attitude of the Central Council of this Association in meeting the Government objection.

Plea for an Indian Pharmacopœia

By N. B. DUTT, M. R. A. S.,

Consulting Botanist and Pharmacologist, Calcutta.

Never perhaps in the history of India has the necessity of paying a close attention to the health of the people become so urgent and imperious as at the present time. Devastating diseases, preventible or otherwise, are gradually tightening their grips on millions of impoverished Indians, who can hardly afford to have two meals a day, not to speak of spending anything for their treatment in illness. The medical relief of the mass has therefore become the burning question of the time. During the Vedic, Budhistic, later Hindu and Mahomedan periods of our history there were systems of medicine and supply of cheap drugs that were more or less suited to the needs and conditions of the people. With the advent of the British, the Western system of medicine came, but it brought no message of hope to the bulk of the Indian population. At present these systems of medicine viz. Ayurvedic, Allopathic and Unani are existing side by side in India. With all the help that it has received from the State, the Western system of medicine has not been able to bring more than 15 per cent of the people within its fold in course of nearly a century. The drugs generally prescribed by the Allopaths are those mentioned in the British Pharmacopœia ; they are only a few compared with the hundreds of drugs consumed in the countryside under the direction of the Vaids, Hakims, herbalists and quacks. Irrespective of the question whether these drugs are useful or not, the broad fact remains that they, rather than the drugs of the B. P., form the only medicine that fall to the lot of the great majority of the Indian people. Nobody will deny that drugs to be efficacious must first of all be potent and then prepared in the right way. But the main fact also must not be overlooked that pure, potent and correctly prepared though the drugs may be, they are of no avail, if their prices stand in the way of their popular use. And this is exactly the state that India has reached at the present time. Between the cheap medicines that are not wholly reliable and the high-priced ones, which are beyond his means, the Indian is at a loss as to what to do and where to go for medical relief. It is generally hoped that a national pharmacopœia which takes into consideration the means of the people and at the same time makes the best use of the indigenous drugs, will contribute materially towards the solution of the knotty problem of medical relief in India.

Modern pharmacopœia does not necessarily guarantee the potency of the drugs mentioned by them. The British Pharmacopœia defines pharmacopœia as a "book containing a list of medicines and compounds and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed and containing such other matters and things relating thereto as the General Council shall think fit." In the Ayurvedic system of medicine, which undoubtedly precedes all other systems of medicine, ancient or modern, there is no pharmacopœia proper, but definite standards are laid down for admitting drugs into the materia medica. These standards comprise the determination of five essenential points regarding a drug viz. (1) *Rasa* or taste, (2) *Guna* or therapeutic effect, (3) *Veerya* or heating and cooling power, (4) *Vipaka* or pharmacological action and (5) *Prabhava* or the adherent nature or active force, which may be taken as physiological effect. Thus it will be seen that the ancient Hindus took more pains to select a drug than is generally done now. It can by no means be said that all these points were given due consideration in cases of hundreds of plants which are found in the later Ayurvedic works ; but that was due to the shortcomings of inferior men into whose hands the practice of Ayurveda fell in its decadent days. Commenting on the list of medicinal plants in the *Kalpasthanum* of the *Susruta Samhita*, Captain Johnston-Saint, the well-known medical Scholar and Director of the Wellcome Historical Medical Museum, London recently said—"The list is interesting as it is in this book that we probably find our earliest notices respecting Botanical Geography, the sites and climates of different plants, the soils and seasons for collecting medicinal plants, the time that they remain good, how they are to be kept and the weights and measures of pharmacy".

How is it that a country, which reached so high a stage of development in several branches of the science of medicine is now saddled with an alien system of medicine ; the reason is not far to seek. The disruption, which occurred in every department of Indian life on the first impact of the civilisation, did not leave the field of medicine undisturbed. It struck heavily at the root of the old order of things ; the respectable Vaids and Hakims and their seminaries, losing the support of the educated and influential section of the community, rapidly dwindled and their places were taken by inferior men or even quacks, who brought the ancient system into disrepute. The breach thus effected in the stronghold of the Indian Socio-medical structure afforded an easy entrance to the Western system of medicine, as it did to many a thing of the West. But in the early period of British rule in India, when the communications between the East and the West were neither so easy, nor so rapid as now, Indian drugs were used by the foreigners in India, the evidence of which is enshrined in O'Shaughnessy's Bengal Dispensatory and Waring's Pharmacopœia of India. Gradually the Indian drugs were, however, discarded through influences which we need not mention here and the British Pharmacopœia was substituted in the place of the works just mentioned. Later on, as the just claim of certain Indian drugs could not very well be ignored, they were included in an Indian and Colonial Addendum to the British Pharmacopœia of 1898. These have been incorporated in the present or 1914 issue of the B. P. It would be interesting here to analyse the sources of the drugs included in the British Pharmacopœia in order to find out how they affect the medical and economic interests of the Indians.

It is generally seen that in all Pharmacopœias of which there are about 18 in the civilized world of to-day, nearly 75 per cent of the drugs are of vegetable origin. It is therefore of primary importance to consider a pharmacopœia from the point of view of vegetable drugs. The total number of drugs in the B. P. derived from plants, excluding ultimate products, amounts to about 158. From our standpoint these may be divided into two bread classes and six groups as follows :—

A. NON-INDIAN.—

I.	Not available in India	36.
II.	do do but having possible substitutes ...	19.
III.	Ordinarily available in Indian markets	18.

B. INDIAN.—

IV.	Growing wild in the country ...	41.
V.	Grown as field crops	13.
VI.	Cultivated to a limited extent on plantation and garden crops ...	31.
	Total ...	158.

It will appear from the above table that 103 plants or slightly less than two-thirds of the total number of plants mentioned in the B. P., grow in the soil of the country or are found in its markets. Again among the remaining 55 plants, it may be possible to substitute 19 drugs by Indian plants possessing similar virtues, as suggested by the pioneers in the field of investigation of Indian drugs. There remain only 36 plants, which are not indigenous in India. There is no reason, however, why these can not be successfully introduced, considering that there are varieties of soils and climate in India to suit almost any kind of plant. When such a preponderating number of the B. P. drugs are found in India the question naturally arises why should India be saddled with the B. P. and not be left free to get up a pharmacopoeia of its own with such drugs as may best suit her medical and economic needs. There should have been a demand for an Indian pharmacopoeia long ago; but the fact is that the public, or for the matter of that, the manufacturers and dealers even in the line of drugs, generally possess a vague idea of the source and distribution of the drugs ordinarily required for the production of the medicines of the Western system. In many cases they are content to follow the beaten path of importation without taking the pains of enquiring whether the same or similar materials are available within the country. This may very well be illustrated by a number of drugs. Two lists are to be found on page 412 of the recently published report of the Drug Enquiry Committee. These are the lists of drugs imported by the Government Medical Stores and the Druggists and Chemists respectively. We are giving a table below in which we have selected 50 B. P. drugs from both these lists and placed them in the groups as mentioned above. It will at once be apparent that we need not depend on any foreign source for the supply of many such drugs.

CLASSIFIED LIST OF DRUGS ORDINARILY IMPORTED

Names of Drugs.	Substitutes.	Remarks.
I. Not available in India		
1. Arnica montana flowers ...	.....	....
2. Claviceps purpurea ...	.....	Occasionally found in the Punjab.
3. Convolvulus scammonia resin ...	.....	....
4. Croton eluteria bark ...	.....	Michelia champaka may be tried as substitute.
5. Gelsemium nitidum root ...	.....	....
6. Grindelia camporum herb ...	.....	....
7. Guaiacum officinale resin ...	.....	... .
8. Hammamelis virginiana bark ...	.....	....
9. Kramira triandra root ...	... ...	....
10. Lavendula vera oil ...	.....	Results of some introduction experiments hopeful.
11. Rhamnus purshianus bark ...	.....	R. wightii may be tried as substitute.
12. Rosemarinus officinalis-oil ...	.....	... .
13. Strophanthus kombe seeds ...	.....	....
14. Prunus virginianus bark ...	.....	....
II. Not available in India, but having possible substitutes		
1. Aconitum Napellus root ...	A. Spicatum ...	A. soongaricum of Gilgit, closely approaches Napellus.
2. Acrostaphylos Uva-ursi leaves ...	Tribulus terrestris ...	....
3. Anthemis nobilis flowers ...	Eupatorium Ayapana ...	....
4. Aristolochia Serpentaria rhizomes ...	A. Indica ...	....
5. Barosoma betulina leaves ...	Pedalium murex ...	....
6. Colchicum autumnale corns ...	C. luteum ...	....
7. Euonymus atropurpureus bark ...	E. tingens and other spp. ...	....
8. Gentiana lutea root ...	G. Dahurica, also Exacum bicolor ...	....
9. Haematoxylon campechianum wood ...	Caesalpinia sappan ...	....
10. Hydrastis canadensis rhizome ...	Erodium cicutarium ...	....
11. Lobelia inflata herb ...	L. nicotianaefolia ...	....
12. Pilocarpus microphyllus leaves ...	Xanthium strumarium	....
13. Polygala senega root ...	Acalypha indica; also P. crotaraloides ...	....
14. Quillaja Saponaria bark ...	Anagallis arvensis ...	....
15. Smilax officinalis root ...	S. ovalifolia; also Hemidesmus indicus...	....
16. Viburnum prunifolium bark ...	V. Foetens ...	....
III. Ordinarily available in Indian Markets		
1. Anacyclus pyrethrum root ...	.....	....
2. Pieraesma exesela wood ...	.....	....

CLASSIFIED LIST OF DRUGS ORDINARILY IMPORTED—*(Contd.)*

Names of Drugs.	Substitutes.	Remarks.
IV. Growing wild in the country		
1. Artemisia maritima var. stechmaniana ...	.....	A brevifolia of N. W. India yields 0·1 to 1·0% santonine.
2. Citrullus colocynthis pulp ...	.....	Grows wild in arid tracts of the Punjab.
3. Datura Stramonium leaves ...	.....	Outer Himalayas.
4. Taraxacum officinale root ...	.....	N. W. Himalayas ; also cultivated.
5. Urginea scilla bulb ...	.....	Indian squills Urginea indica and Scilla indica quite plentiful in the sea coast and interior.
6. Valeriana officinalis rhizome ...	.....	Indian V. Wallichii wild in N. W. Himalaya.
V. Garden and Plantations crops		
1. Aacia Ssenegal gum ...	.....	Introduced in Sind.
2. Carum carni seeds ...	.....	Cold weather crop in gardens in N. India.
3. Citrus acida Var-limonum ...	.....	Grown in gardens, also wild in Garhwal.
4. Cytisus scoparius tops ...	.....	Grown in the Nilgiris.
5. Digitalis purpurea Leaves ...	.....	Cultivated in Darjeeling, Kashmir and Nilgiris. Leaves of the last place inferior.
6. Erythroxghon coca leaves ...	.....	Plantations in S. India.
7. Hyoscyamus niger leaves ...	.....	Grown near Saharanpur ; the species *niger muticus* & *reticulatus* wild in N. W. Himalaya.
8. Ipomœa purga root ...	.....	Cultivated in the Nilgiris.
9. Myristica fragrans oil ...	.....	Nutmeg is grown to some extent in S. India.
10. Papaver rhoedas petals ...	.....	Raised as season flower.
11. Pimpinella anisum seeds ...	.....	Winter season garden crop in U. P
12. Psychotria Ipecacuahna ...	.....	Grown in cinchona plantations, Darjeeling.

It is generally held that the pharmacopœia of a country reflects the demand for particular drugs by its medical men. If B. P. be the official pharmacopœia for India, then it is to be assumed that the medical public of India is composed solely of the advocates of the Western system of medicine and that the *Vaids* and *Hakims* who contribute to the medical relief of an immensely large body of men are nowhere. This preposterous assumption not only tends to obscure the real situation but leads to considerable mischief since it perpetuates an undesirable antagonism between the followers of the different systems of medicine. It should, on the contrary, be the aim of a national pharmacopœia to bring together the potent drugs of all the systems of medicine prevalent in India. Nor would it be difficult to do so, for some well-known drugs of the other systems have already gained admission to the Western system of medicine. It is far from our intention to say that in India there should be a common pharmacopœia for all the systems ; they may be left to develop themselves each in its own way ; what we wish to lay stress upon is that a national pharmacopœia should be impartial and comprehensive in the choice of its drugs.

After the selection of drugs the next most important thing is the mode of their employment or in other words, making such preparations of them as may be cheap and efficacious. In this respect also there must be some departure from the Western methods of pharmacy. The rage of the present age is for the isolated active principles of drugs ; this adds to the cost of the medicines without guaranteeing in many cases a greater efficacy. There is difference of opinion as to whether the therapeutic value of a vegetable drug is due to the action of one constituent or due to the combined action of several constituents. The latter view has been found to be correct in the case of cinchona, ipecacuanha, kurchi etc. Many physicians are returning to the old form of administering digitalis viz. the powdered leaf. What is the need of such high-priced preparations as tinctures, extracts etc. if the same purpose may be served by powders, pills, tablets or simple decoctions and infusions. In fact, that is an important point for consideration in the preparation of an Indian pharmacopœia, regard being had to the economic condition of the people. It can not be a mere accident or an effect of ignorance that pharmaceutical preparations in the Ayurvedic and Unani systems of medicine are of the simplest type, approaching nature as closely as possible. It may be, that centuries of experience led the masters of medicine of yore to the conclusion that the best form of administration of a drug is to give it entire and in as fresh a state as may be practicable, especially in countries, whose climatic conditions do not favour long storage.

While it is true that there has been no insistent demand for a pharmacopœia for India till lately, it is also to be admitted that several influences have been at work to counteract such a demand, if and when it manifests itself. With honourable exception members of the Indian Medical Service are not favourably disposed either towards an wider use of indigenous drugs or towards the introduction of an Indian pharmacopœia. They perhaps think that inferiority is stamped on the men as well as the natural products of the East. This is all the more regrettable since some distinguished pioneers in the field of research on Indian drugs were men belonginging to that service. Then again there are the foreign manufacturers of drugs, chemicals, patent and proprietary medicines etc. to whom the prevalence of the B. P. in India is a boon. For where can there be a better outlet for pharmaceutical and allied goods, good, bad and indifferent, than in a country of 320 millions of men, having no directing voice in their own affairs and without any effective measures regarding the control of food and drugs. These influences combined with the past apathetic attitude of our medical practitioners have hitherto stood in the way of a strong demand for an Indian Pharmacopœia and all that it connotes. The absence of a national pharmacopœia has had also its effect on the Indian drug trade. The statistics compiled by the Drug Enquiry Committee for five years from 1924 to 1929 show that while there has been a rise of only 6 lakhs of rupees in the value of exports during this period, the value of imports of drugs and medicines has increased by 33 lakhs of rupees *i. e.* over five times of that of the exports. The evil consequence of this will be fully

realised when it is remembered that Indian drugs are purchased by the foreign manufacturers at a cost little more than that of dirt, while the finished products are sent back to this country at prices sometimes as high as hundred times that of the crude drug. The utilisation of Indian drugs has therefore become much more profitable to foreigners than to ourselves. Moreover, the course of the Indian drug trade has been such as to stifle the prospects of many a valuable Indian drug on the world's drug-market. The only major commercial drugs of India now are cinchona, nux-vomica and senna, whereas at least a few other drugs could have come under this category had there been a national pharmacopœia stimulating their proper collection and cultivation, as well as regulations regarding the quality of export. We can not forget that some of the most well-known drugs of all the pharmacopœias of the world were originally derived from or through India. The famous Portuguese physician of Goa, Garcia da Orta (16th Century) was the first scientific chronicler of such important Asiatic drugs, which were used to be exported from India at that time, as nux-vomica, stramonium, betel-nut, opium, pepper, ginger, cinnamon, cloves, camphor, benzene, cubeb etc. Possessing a flora unrivalled in the world, India may yet give many a valuable drug to the world, provided similar encouraging conditions return again.

It is a curious fact and not much to our credit too, that the Indian crude drugs and the country-made preparations thereof, that were found to be quite equal to the foreign articles of the same kind during the late War, were in certain instances discarded instead of being improved, when peace was again restored. Those, who were after profit only, realised that record prices were no longer obtainable and either abandoned the drug-business or began to import foreign goods. This could not have been so easily done, had there been a national pharmacopœia giving preference to indigenous materials and finished products manufactured within the country. An Indian Pharmacopœia is essential for the proper development of an Indian drug industry. There is no country, where it has been possible to build up a considerable drug industry without having a pharmacopœia of its own. Even China has realised the necessity of it and the Board of Health of the Nanking Government has lately prepared a draft pharmacopœia with the ultimate object of furthering the interests both of Chinese medicines and Chinese drug industry. Indeed to be truly useful a pharmacopœia must represent the drug resources of a country and should contribute towards rendering the country self-dependent in the matter of drugs and medicines.

Compilation of a pharmacopœia is no doubt an uphill work. Considering the volume of work that will have to be undertaken in the departments of pharmacognosy, pharmacology, chemistry, clinics etc., before a proper selection of drugs could be made, it would be advisable to commence the preliminary work immediately. To wait for the formation of a general medical council and then for a Pharmacopœia Committee to be appointed by it, would simply mean loss of time without any corresponding gain. Moreover any committee for such a purpose by the Indian Medical Association is likely to be more representative of all the interests concerned than any official committee. We, therefore, earnestly hope and trust that the Indian Medical Association will keep pace with the national movement in its legitimate sphere by helping the country to have a pharmacopœia of its own, and thus bring about a new era, in which thousands of poor Indians may expect to get drugs and medicines at a cost within their humble means.

Facilities of Study of the Problems in Heart Diseases in Germany

DR. J. C. GUPTA, M.B. (Cal.), M.D. (Cologne), Heidelberg.

My task here is to talk to you to-day something regarding the problems of Heart Diseases, particularly concerning the facilities one can obtain here in Germany. It is a highly technical subject, but I shall try my best to bring it to you in such a manner as it may be understandable to you all.

When anybody comes to a foreign land to study problems on Heart, he must have a clear idea of the part he has to play. I mean a clear conception of the needs of his country on the one hand and the possibility of attaining these objects in the land concerned. Well, I would summarily dismiss the first because the problems which interest the whole world are also problems of our folk. I confine myself therefore to the second point.

Heart diseases are very common in Germany. With the exception of tuberculosis, every third death (Fraenkel) is from heart failure. Germans are alert to it. A living nation, born with a determination, is fighting the disease steadily and continually.

One is astonished that with the single exception of Kerchhoff Institute in Bad-Nauheim, there is no special institution in Germany as one finds in England or in America, for studying Heart Diseases. This seems odd at first sight. Germans do not believe in specialisation in Internal Medicine. I cannot say they are wrong. The organs of the human system are functionally interrelated in such a highly complex manner, that it is difficult to conceive that one can have such a complete knowledge of any one organ as to be able to study and handle diseases of that organ unless one has acquired a knowledge of the functions and relations of associated organs. This is all the more true of Heart Diseases. Latest researches have shown that in the derangements of the heart, the heart alone could not be held solely responsible. On the contrary, it is due to a disturbance of the regulating mechanisms, consisting of the complex system of inter-related processes, in which heart acts only as a central pumping organ. The brain with the respiratory and vasomotor centres and nerves, the vascular system supplying the needs of the different tissues, the oxygen requirement, CO_2 output and others have each an important role to perform. So we speak not of heart disease but of diseases of the circulatory system. Considering the practical aspect of the question, it is a matter of common experience that the disturbances of the kidneys have a closer relation to affections of the heart than others. Sometimes one follows the other, sometimes the symptoms of one resemble so closely those of the other that it is difficult to decide, which of the two causes is the determining factor in any particular case. It follows naturally that one must acquaint himself with almost every system in its functional relation to heart in order to be a specialist in Heart Diseases. The Germans look more into the practical side of the subject. It appears that they deprecate the idea of sitting in a laboratory and conducting researches leaving the patient aside.

That is why it is so customary in Germany to have clinics in general medicine rather than in special subjects. There is not a single German Clinic, I might mention in passing, where up-to-date equipments for clinical investigation of the circulatory system are lacking. Side by side there are facilities in various clinics for conducting higher scientific researches on special lines.

To a student, these afford an opportunity of studying cases in all their bearings and at the sametime of learning the theoretical aspects—an opportunity which is scarcely to be had in special institutes such as are found in America or in England.

Let us analyse now the problems of Heart Diseases, which are drawing close attention of the medical people. The most important problem is the problem of heart failure. Leaving aside the cause of heart failure, which is yet to be solved in spite of all our gigantic attempts for years together, what interests the world are the problems of diagnosis and therapeutics of this disease. Years of researches and analysis so far as one can at present foresee, promise to be a definite advancement in the study of heart diseases. In earlier times the defects of the valves guarding the chambers of the heart were thought to be the cause of heart failure. It was however soon recognised that valvular defects by themselves could not be called a heart failure. Pre- war recruitment for military services and records of examination for insurance showed that valvular defects may exist for years, without the slightest manifestation of a failure or a functional incapacity. If an infection, an attack of influenza for instance supervenes, the whole scene is changed ; the man suddenly shows signs of failure, which advance, step by step bringing about a premature death. Krehl of Heidelberg was one of the first to point out the share of the heart muscle in the production of such a failure. His school, particulary his successer Siebeck has been expanding on these lines in the Heidelberg Clinic.

An older physiologist had formulated that circulation served as a means of supplying O_2 to the tissues and this he explained by the term "Protoplasma dynamies". The explanation of heart failure was sought in inadequacy of the heart to fulfil this function. Eppinger (now in the Cologne University Clinic) expanded this idea further. Protoplasma dynamics implies the role of tissues, the muscles and the other organs of the body in the circulation process. Unknown disturbances in the tissues (muscles and organs), owing to their incapacity to deal with the products of metabolism (resynthesis of the lactic acid formed during contraction into assimilable glykogen), lead to a condition of acidosis, and the rapid breathing in heart failure, he suggested, is an attempt of the body to eliminate the toxic acid through the lungs. Thus stepped Biochemistry in the study of circulatory disturbances. Soon however an objection was raised, because the metabolic disturbances might be a consequence of a primary defect in the heart rather than its cause. Eppinger himself and later Romberg (from the Munich University Clinic) adduced evidence in support of this view. I want to point out in this connection that due to liberation of some toxic break-down products of metabolism, substances such as histamin and the like, acute heart failure may be caused in subjects with perfectly healthy heart, because these substances could hold a large quantity of blood in the tissues (splanchnic area), so that the heart contracts almost empty. Studies on the actions of various substances generated in the body either as an effect of normal process or deranged function, which have been adding considerably to our understanding of various mysterious circulatory phenomena of shock and surgical deaths are being conducted by Eppinger and his school in Cologne University, and Volhard in Frankfurt University.

It was suggested that the disturbance of regulation of blood supply is responsible for the heart failure. In normal condition the circulatory system is so adjusted that each organ gets its amount of blood at a particular rate. One talked about stagnation and swamps. These ideas came from the fact that organs such as the liver, spleen, skin (Sup. capillary plexus), are known to accommodate a large quantity of blood under certain physiological and pathological conditions. Attention, was directed to these swamps or, "Depot organs" as they are called. Von Bergmann and his school (Wohlheim and Lange in particular) of the Berlin University have been working on the significance of these swamps to circulation. Attempts were to get an idea about the volume of circulating blood. Thus, haemodynamics was brought in to solve the problem of heart-failure. The basal blood volume, *ie.* the volume of ciculating blood in a person, absolutely at rest and fasting, was first obtained. This is found to be more or less constant. In diseased conditions it differed, differently of course in acute or congestive failures (– decompensation and + decompensation). The blood volume responded to different drugs differently. These interesting problems are being extensively studied in different clinics of Germany, particularly in the II. University Clinic in Berlin under Prof v. Bergmann and Cologne University Clinic under Prof. Eppinger.

To go deeper into the facts about heart affections one must also know the velocity and rate of blood flow. It was soon found out that the velocity varied in different organs, because it was O_2 supply and not the actual amount of blood passing under different circumstances is the determining factor. It was attempted to know the normal velocity and its variations in different pathological conditions. This led the research worker to the problem of the volume of blood, pumped out by the heart with each beat and the volume of blood discharged per minute. These are two of the most modern and important advances in the cardiac pathology, because if these could be determined in individual organs and tissues, we could detect not only the amount, but also the place of first affection thus offering opportunity of early therapeutical measures. The Cologne Clinic, the Clinic in Freiburg under Prof. Thannhauser, the Clinic in Leipzing under Prof. Morawitz are some of the important clinics where this ploblem is being intensively studied.

It is quite conceivable that difficulties arose as regards the technic, by which these objects could be satisfactorily attained. Rein, formerly of Freiburg, now of Gottingen, invented the "Thermostromuhr" affording a possibility of measuring the velocity and the rate of blood flow not only through the heart and aorta but also through the different organs.

Another note-worthy technical advance of the present day is the study of Broemser in Heidelberg in the determination of the output of the heart per beat. Formerly the only possibility of measuring this output was either through complicated gas analytical methods or through Starling's heart lungs preparations in experimental animals which were unsuitable for application in man. This new method of Broemser, which is as yet in the experimental stage, offers an easy method, and if perfected could be adapted for every-day clinical practice.

The problem of heart failure has also drawn close attention of the physicians and the public from two other aspects, I mean from the view-point of the blood-pressure and angina pectoris. These are being studied in various clinics from theoretical as well as practical points of view. Hochrein from Prof. Morawitz's clinic in Leipzig is carrying out studies about the functions of the coronary vessels which are of highest importance, in understanding the physiology and pathology of angina and its realtion to heart failure. The study of blood pressure is carried out almost in every clinic, specially worthy of mentioning are the Heidelberg, Berlin, and Halle Clinics.

Of the diagnostic technics, electrocardiography as you perhaps all know , deserves a close attention, being one of the recent advances. It was attempted at first to define the course of electrical current of action during the process of heart contraction. Electrocardiography is even now in its infancy. Its development and refinement have been brought about by efforts of Wenckebach's School and in more recent times the Kerchhoff's Institute in Bad-Nauheim under Dr. Weber. Through the introduction of amplifiers it is made possible not only to detect affections of the conducting

system but also finer pathological processes affecting the muscle, the diagnosis of latent angina pectoris and so on.

In Roentgenology, thanks to the researches of German workers, particularly of Stumpf, a technic has been worked out known after his name, "Stumpf's Kymographion" which could detect and follow with naked eye on the screen the heart in its various derangements.

In therapeutics researches are being carried on in almost every clinic. Mention should be made of the famous Bad Nauheim and the Kerchhoff Institute under Groedel. An old city of world fame Nauheim has been long known to be a heart resort. Important researches on the value, effect, and advances in physical therapy of different kinds such as bath, graduated exercises etc. are being scientifically studied in the Kerchhoff's Institute. Critically speaking, one might not agree to all the methods here adopted, but there is no doubt that important studies are being carried out, which are increasing our knowledge of cardiac therapeutics.

I have mentioned the various lines along which researches are being carried out in different German clinics, one is certain to find room for advanced studies in one or other of these clinics and from personal experience I find the German mind is open and a willing worker can always find a most friendly guidance, most cordial help and ample opportunity from German workers. *

* Read in the 2nd Convention of the Indian Students Abroad held in Munich, Dec. 21, 1932.

Medical News and Notes

[Items of news and notes of general interest to the profession for incorporation in this section from the members of the profession will be greatly appreciated—EDITOR]

Proposed Hospital for Calcutta Children. A children's Hospital has been a crying need in Calcutta and the Hon'ble Raja of Santosh, the President of the I.F.A., is to be congratulated on his scheme, of establishing such a hospital, out of the sale proceeds of the charity matches organized by the I. F. A. & C. F. L. In this connection an important conference of the representatives of the I. F. A. and the C. F. L. with four of Calcutta's leading medical men, DR. B. C. ROY, Col P. F. Gow, Principal, Medical College, Sir NILRATAN SIRCAR, and DR. Mrs G. MCLEAN of the Dufferin Hospital was held on the 11th May, last.

Of the various questions discussed at the conference the most important was whether the I. F. A. and the C. F. L. would be justified to reserve the net proceeds of charity matches for the establishment of a childern's hospital if they could legitimately hope to provide a lakh of rupees in two years time, the hospital having 50 free beds and 26 paying beds. The Raja of Santosh expressed the hope that the money which the I. F. A. and the C. F. L. would provide for the hospital, would be supplemented by private charities and the required money would be forthcoming.

SIR NILRATAN SIRCAR said that the other provinces which possessed more hospitals, started with a small beginning and did not have even a lakh of rupees to start with. These have now more than twenty lakhs of rupees to carry on their work. The scheme was quite practical and Calcutta has the advantage over the other provinces that should such a hospital be founded the service of reputed physicians here would be available free. This was not the case with the the other provinces.

After the conference was over, the following resolution was passed by the I. F. A. Hospital Committee.

This Committee recommends that the net receipts of the charity matches in the current season shall be reserved for the establishment of a Children's Hospital in Calcutta, provided, that the Government or the Corporation of Calcutta, or any other financially sound and reliable body associated with a hospital in Calcutta undertakes to meet recurring expenses of the proposed hospital.

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Callous Treatment of Indian Patients. Hospital administration in Calcutta was the subject of discussion at a meeting of the Rotary Club held on Tuesday, the 16th May last. Rotarian W. J. HERRIDGE, Chairman of the Public Affairs Committee of the Rotary Club opened the discussion by criticising the administration of hospitals in general.

The following are some of the defects made prominent on the discussion :

1. Delay in the treatment of outdoor patients due to lack of efficient management and paucity of medical staff.

2. Reduction in the number of Dressers at the Hospitals and forcing patients to remove their own bandages, clean their own wounds and apply fresh bandages in many cases.

3. Dealy in admission of in-patients resulting in numerous serious cases remaining for considerable periods in the Admission Room even when requiring almost immediate treatment.

4. Absence of proper attention to certain patients unless gratuities are paid to the Ward Orderlies.

5. Doctors and students in hospitals do not appreciate that patients are still human beings. A little more gentleness of hand and sympathetic treatment would go a long way to make the patients more comfortable.

6. Infectious diseases should be treated in hospitals situated far away from ordinary hospitals and from very thickly populated residential parts. (The present infectious diseases section in the Campbell Hospital should, I consider, be removed to a new site, preferably right out of the city, but this will of course, involve the opening of new hospital and funds may not be available at present for this purpose but, if such hospital were established, there would be no necesssity for the Corporation of Calcutta to provide for special accommodation during epidemics, such as the recent epidemic of pox and cholera, which must over a period of years prove as expensive as a permanent structure.)

It was pointed out that all the above defects are not so much due to financial stringency of which much has been made of recently, as to the want of more business-like methods, more humanistic attitude of the doctors and assistants. It was suggested that the whole of hospital administration and organisation should be thoroughly investigated into by a special committee appointed by Government when the whole subject can be examined.

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Hygiene Museum for Bombay. With a view to combat superstition, ignorance, illiteracy, poverty and untouchability in India, efforts are being made in Bombay to found a Hygiene Museum on the lines of the German Hygiene Museum at Dresden.

The museum will enable every person to obtain such knowledge by observation, as will help him to lead a healthy, happy life by fighting disease and illness by simple, easy and scientific methods. Among the branches of work there will be a news and information bureau, materials for observation and teaching, travelling exhibitions, film bureau, publication of books and pamphlets, physical culture and hygiene academy.

It is estimated that the cost of the building, together with the material for education and the establishment of an academy will be Rs. 50 lakhs. The organisers expect to receive shortly a number of models and charts from the German Hygiene Museum, so that a small beginning will be made soon. They appeal to the public for all possible help and co-operation.

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Governor's Hospital Fund, Bombay. There is great public dissatisfaction in Bombay, especially among the contributors to the Governor's Hospital Fund, as the aims of the fund are not being fulfilled The Fund was started in 1925 with a view to raise gradually the hospital accommodation in the city of Bombay to 5,000 beds. Only 276 beds have been provided out of this Fund. But it is to be regretted that no less than 174 remain unopened owing to lack of funds.

Originally it was contemplated that these beds would be maintained out of the general revenues supplimented by other sources. But this is impossible now, due to the embarrassed condition of the Government, the Municipality and the charitable public.

This has led the General Committee to consider as a temporary measure, the question of amending the rules of the Fund, so as to enable them to utilise the annual interest on their invested capital for the purpose of opening and maintaining the beds, already provided. The Committee hold a balance of Rs. 8,27,427 and the annual interest on this invested capital last year amounted to Rs. 36,489. This is a considerable sum and if it could be utilised for the purpose indicated it would go some way towards giving effect to the purposes, with which the Fund was originally started.

According to legal opinion the General Committee have power to amend the rules so as to enable the money to be utilised on other objects of medical relief, such as the maintenance of the beds already established with the help of the Fund, if they find that their original intentions can not be fulfilled. It is understood that the Hon. Minister for Local Self-Government has already informally discussed this matter with representatives of the Fund and of the Corporation.

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Delhi's Scheme for a Free Hospital for Children. The alarming rate of mortality and sickness among the children in Delhi, the rapidly growing Imperial City of India and the present inadequate facilities for their treatment have led an influential section of Delhi citizens to formulate a scheme to open a number of free dispensaries in various parts of the city to provide treatment and give correct medical advice entirely free of charge. It is further contemplated to build a Children's Free Hospital run entirely by the public and by a complete honorary medical staff, when these preliminary dispensaries would act as collecting centres for the main hospital.

An influential committee consisting of nine of the leading citizens of Delhi representing all communities will act as general advisers and control the scheme financially. A number of leading physicians, surgeons and specialists have offered their services voluntarily.

The first of the series of free dispensaries was opened on May 1, 1933 and in the very first week, the daily attendance reached to 50 patients.

A sum of Rs. 5,000 has already been collected and more money is needed. All donations, however, small may be sent to the Honorary Treasurer (MR. S. C. FOZDAR), Central Bank of India Ltd. (Delhi).

It is understood that a very prominent Rais of Delhi has promised to donate a sum of rupees one lakh and fifty thousand towards building the main hospital early next year.

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Hospital Extension at New Delhi. The New Delhi Municipal Committee at its meeting held on 27-5-33 decided to extend the Civil Hospital Buildings, New Delhi, at an approximate cost of Rs. 45,000. The extension would include six private wards and two nurses' quarters. It is understood that the new extended hospital would be associated with the name of Her Excellency LADY WILLINGDON.

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First Indian Delegate to the International Nurses' Conference. MISS B. J. SINGH, an Indian missionary lady belonging to the Delhi Baptist Mission proceeded to Europe on the last week of April as the first Indian delegate to the International Congress of Nurses' Associations to be held shortly at Paris and Brussells.

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Registration of L. I. M's, Madras. The Madras Government has approved of certain rules framed for the registration of practitioners of Indian medicine in that province. Persons possessing the following qualifications shall be eligible for registration :

(1) Diplomas in Indian Medicine granted by the Board of Examiners in Indian Medicine appointed by the Government of Madras.

(2) Diplomas in Indian Medicine granted by or under the authority of the Government of India or a provincial Government or an Indian State or by any recognised University or Examining Body in India, provided that applications for the recognition of such diplomas are recommended by the Central Board of Indian Medicine, Madras and accepted by the Government of Madras.

(3) Holders of Government titles of professional eminence.

(4) Other practitioners of Indian medicine, who do not hold any of the qualifications noted above but are granted special recognition by the Government of Madras on their applications being recommended by the Central Board of Indian Medicine.

The rules also provide for removing any practitioner from the rolls for professional misconduct and other valid reasons.

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The India Institute of the Deutsche Akademie. The India Institute of the Deutsche Akademie announces the award of the following new scholarships for the academic year 1933/34 to the following Indian graduates, who are to carry on higher studies in medicine and allied subjects in various German Universities and institutes.

Berlin, St. Hedwigs Hospital: 1. MR. B. N. SHARMA, M.B., B.Sc., of Lucknow Medical College and formerly Assistant House Surgeon at the Lucknow University Hospital, at present working at the University Hospital in Vienna.

2. MR. B. K. PALIT, M.Sc., (University of Wisconsin) and M. D., (Washington University, St. Louis), at present practising surgery at a Chicago hospital.

Hamburg University: 3. MR. S. N. SANYAL, M.B., Calcutta University, House Surgeon in the Calcutta Medical College Hospital.

Jena University Institute for Applied Optics and Microscopy: MR. S. HARIHARAN, M. A., M. Sc., Madras University, Demonstrator in Physics in the Presidency College, Madras.

Ten scholars of the Institute, who have been enjoying scholarships since the academic year 1931/32 will receive further help from the Institute during the summer semester, 1933 to enable them to finish their studies for Doctorate.

The following Indian scholars of the Deutsche Akademie have successfully passed their doctor's examination during the last semester.

Munich University: DR. MISS MAITREYEE BOSE, M. B., (Calcutta).

Cologne University: DR. J. C. GUPTA, M.B., (Calcutta).

Freiburg University: DR. B. N. SEN GUPTA, M. B., (Calcutta).

Königsberg University: MR. INDRA SEN, M. A., (Punjab) DR. PHIL. (Freiburg) has been awarded the Teaching Followship (Hindi) in the University of Königsberg.

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Famous Sexual Institute Raided. A movement has originated in Germany to purge the country of un-German books. Groups of students are raiding the various public libraries for the purpose.

Professor MAGNUS HIRSCHFELD'S Sexual Institute, Berlin, known to medical men throughout the world for its exhaustive library on sexual matters, was the target of their attack recently. Hundreds of works and pictures were carried off from the institute and conveyed by motor car to the Berlin University, to be publicly burned later on.

It is understood that private libraries will not be touched, as students are appealing to their owners to hand over un-German books spontaneously.

Many of our readers will remember Prof. MAGNUS HIRSCHFELD, who during his world

tour in 1931 came to Calcutta and read an illuminating paper on Sex Pathology at a meeting of the Indian Medical Association (Bengal Branch). This was subsequently printed in this Journal in its October 1931 issue.

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Voronoff Rejuvenates Himself. According to the "Sunday Chronicle" correspondent DR. SERGE VORONOFF, the world-famous "monkey gland" expert is about to be rejuvenated by his own method by his brother GEORGE so as to prolong his life and stimulate his mental energy to enable him to continue new research work on cancer.

He is reported to have said : "The grafting operation on myself by my brother GEORGE would certainly prove beyond all question my great faith in my own experiments and discoveries".

"There is still important work I have to do. My discovery of the gland grafting way to longevity will prolong my life and stimulate me so that I can go on working with my cancer research.

"With my brother and one of my assistants, M. BATELT, I am solely occupied now with cancer work and before long I hope to make an important announcement."

Case Note

Congenital Aortic Stenosis in a Boy of 16.

By ABDUL HAMEED, M.D., M.R.C.P., (London).
From the Department of Pathology, Lucknow University.

N, mohammedan male, school boy of 16, consulted me for the following complaints :

1. Breathlessness after exertion.
2. Dizziness before the eyes.
   Duration two years.

Family History : Parents healthy. Mother had a weak constitution. The patient was the third child of his parents and was born at the seventh month of pregnancy. No history of syphilis in the family.

History of previous illness : Had an attack of typhoid fever two years ago. Had attacks of malaria off and on. No history of rheumatic fever.

Present condition : Patient was thinly built, looked pale and appeared undernourished for his age. Cyanosis was not present. Clubbing of the fingers was absent.

Physical examination : Teeth were clean. Pyorrhoea alveolaris was absent. Tongue was clean. Bowels were regular. Liver and spleen were not palpable.

Respiratory and nervous systems were normal.

CIRCULATORY SYSTEM :

Palpation—A systolic thrill was felt in the upper part of the sternum, which was transmitted to the vessels of the neck, more to the right carotid than to the left.

Percussion—Heart enlarged. Apex beat was found in the fifth interspace in the nipple line. Right side of the heart was not enlarged.

Auscultation—Mitral area—There was a short systolic murmur at the apex slightly conducted outwards.

Pulmonary area—A harsh systolic murmur with reduplication of the second sound was present.

Aortic area—There was a low, harsh systolic murmur conducted to the vessels of the neck. Second aortic sound was absent.

Pulse—78 per minute, regular, tension low. Had a gradual and slow rise. Pulse had the full characters of that of aortic stenosis.

Sphygmogram and electro-cardiogram were not done.

No other congenital defects were present.

A diagnosis of congenital aortic stenosis was made.

COMMENT :

It is extremely rare to come across with cases of aortic stenosis in young adult life. The condition is mostly found in the old people when it is due to an atheromatous condition of the aortic valves. Even syphilis does not give rise to any aortic stenosis. This condition in this case was not secondary to any acute endocarditis because there was no history like that, nor any other valve showed any lesions. The murmurs present in the mitral and pulmonary area were transmitted from the aortic area and hence the natural inference was that the condition was congenital.

Later it was brought to my notice that the boy while returning one evening, from his school, fell down and died. No post-mortem could be done. *

* Read at the Scientific Section of the IX All-India Medical conference, held at Lucknow, December, 1932.

Indian Medical Association and Government Ban on Membership

By K. S. RAY, M.A., B.Sc., M.B., Ch.B. (Edin.)

Joint Hon. Secretary, Indian Medical Association.

Recently the Government of India issued notifications to medical men in Government service pointing out the implications of Government Servants' Conduct Rules in regard to the membership of Government servants of the Indian Medical Association.

In a recent letter to the Secretary of the Indian Medical Association it was pointed out that as one of the objects of the Association was to support the candidature of members of the Association for legislative bodies a Government servant could not become a member of the Association without mischief to himself under the Government Servants' Conduct Rules.

This Association is clearly a professional and not a political body, and further it is not seen how the particular section of the Objects of the Association offends the Government Servants' Conduct Rules. The section quoted of the Government Servants' Conduct Rules does not prevent Government servants from taking part in political or public election, since it cannot be Government's policy to deprive its servants of the franchise. Indeed, Government offices are closed on election days to enable their servants to vote and there are also instances of Government servants standing for elections.

In considering the question, the Central Council at a meeting held on the 13th May, 1933, were, however, of the opinion that while this section of their objects was of very little practical consequence, it was necessary that the Association should be as representative as possible of the Indian medical profession and that consequently nothing should be allowed to militate against any large section of the profession from membership of the Association. On the ground of a broad policy it was advisable for the Government of India, in their own interests, to encourage the development of science and the interests of the medical profession itself, by allowing its servants to join such bodies which mean so much to the health and welfare of the country. But if after all these considerations, Government still could not see its way to remove their objection, the Central Council were prepared and had recommended the deletion of the offending clause at an emergent meeting of the general body of members, which would be called upon on receipt of Government's reply. In the meantime this clause should be considered inoperative.

The Council now hope that the Government of India will withdraw all restrictions on its servants joining this Association and extend to it the same privilege as is possessed by joining the British Medical Association. It is hoped, that Government medical men will be reassured in regard to their own position *vis a vis* the Indian Medical Association.

The relative correspondence is published below :

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Copy of letter No. F. 49-21/32-H dated the 14th March, 1933 from Khan Bahadur S. Khurshaid Muhammad, P.C.S., Offg. Deputy Secretary of the Government of India, Department of Education, Health and Lands, New Delhi to the Honorary Secretary, The Indian Medical Association.

Re : Participation of Government Medical Officers in the Indian Medical Association.

Sir,

I am directed to acknowledge with thanks receipt of a copy of the revised rules and regulations of the Indian Medical Association supplied with your letter No. Genl. 91, dated the 22nd November, 1932, and to say that as one of the objects of the Association, as defined in rule 2(i), is to support the candidature of members of the Association for legislative bodies, a Government servant cannot become a member of the Association without bringing himself within the mischief of sub-rule (2), of rule 23 of the Government Servants' Conduct Rules. A copy of this sub-rule is enclosed herewith for your information.

Extract from the Government Servants' Conduct Rules

23. (2) A whole-time Government servant shall not canvass or otherwise interfere or use his influence in connection with, or take part in, any election to a legislative body :

"Provided that a Government servant who is qualified to vote at such election may exercise his right to vote, but if he does so, shall give no indication of the manner in which he proposes to vote or has voted."

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Copy of letter No. Genl. 87, dated 3rd April, 1933 from Dr. K. S. Ray, Jt Hon. Secretary, Indian Medical Association to Khan Bahadur S. Khurshaid Muhammad, P.C.S., Offg. Deputy Secretary to the Government of India, Department of Education, Health and Lands, New Delhi.

Re : Participation of Government Medical Officers in the Indian Medical Association.

Sir,

I beg to acknowledge receipt of your letter No. F.49-21/32-H dated the 14th March 1933, from which I understand that in view of rule 2(i), namely, to support the candidature of members of the Association for legislative bodies, a Government servant is thereby prevented from becoming a member of the Indian Medical Association.

I am directed to enquire if the rules of the Association are so amended as to exclude these members of the Association who are Government servants from taking part in any election to a legislative body, the Government would permit Government servants to become members of this Association.

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Copy of letter No. Genl. 199 dated the 25th April, 1933 from Dr. K. S. Ray, Jt. Hon. Secretary, Indian Medical Association, 67, Dharamtala Street, Calcutta to G. S. Bajpai, Esp., C.I.E., I.C.S., Secretary, Department of Education, Health and Lands, Government of India, Simla.

I beg to confirm my telegram of date reading as follows:

> "Referring my letter Genl. 87 of 3rd instant, the matter is shortly to be considered by the Central Council, Indian Medical Association. In view of which, we earnestly request Government to defer any action in regard to Government medical men joining this Association. Writing."

The telegram is self-explanatory and is necessitated by our apprehension that Government may have circulated to all Provincial Governments precluding medical men in Govrnment service from joining or remaining members of the Indian Medical Association.

The Central Council will be meeting on the 13th May 1933 and I shall immediately convey to you their decision in the matter.

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Copy of letter No. Genl. 207 dated the 17th May, 1933 from Dr. K. S. Ray, Jt. Hon. Secretary, Indian Medical Association, 67, Dharmatala Street, Calcutta, to the Secretary, Government of India, Department of Education, Health and Lands, Simla.

Re: Participation of Government Medical Officers in the Indian Medical Association.

SIR,

I have the honour to revert to correspondence resting with my letter No. Genl. 87 dated the 8th April 1933 in reply to letter No. F. 49-21/32-H dated the 14th March 1933 from the Offg. Deputy Secretary of your Department.

I regret that no reply has as yet been received to my letter mentioned above, but in the meantime the Central Council of this Association have met and considered the question and they have directed me to forward for your consideration the following resolution :—

"While it was held that Clause 23(2) of the Government Servants' Conduct Rules quoted by the Government of India was not applicable to the case as it did not prevent Government servants from taking part in elections, yet if Government persisted in their objection the offending clause in the Objects of the Association should be deleted. It was resolved therefore, that clause 2(i) under the heading of Objects in the rules of the Association, namely "Support the candidature of a member or members of the Association for any medical or legislative bodies or any public body in which questions affecting public health, the medical profession, medical education and medical relief are considered" be recommended for deletion and that a copy of this resolution be forwarded to the Government of India for their information, together with a request that in view of the above recommendation regarding the deletion of this clause and its impending alteration the Government of India be pleased to allow medical men in Government services to become members of the Indian Medical Association and that any orders that may have been issued by the Government of India to the contrary, be rescinded, and further that a copy of the resolution be sent to the Provincial Governments and to the members of the Indian Medical Association who are in Government service with a request that those who have submitted their resignations should reconsider the matter and withdraw the same."

In considering Clause 23(2) of the Government Servants' Conduct Rules, the Central Council wish to point out that this rule does not prevent Government servants from taking part in political or public elections, the only restriction, being that they should not make known the candidates for whom they intend to vote. It surely cannot be the purpose of Government to deprive its employees of the franchise ; indeed it is known that Government offices have been closed on election days to allow their servants to exercise their votes and have also given some of their servants permission to stand as candidates for election. The Central Council cannot, therefore, see the bearing of Clause 23(2) of Government Servants' Conduct Rules on the relative clause of this Association's Objects.

I would emphasise that the Indian Medical Association is purely a professional and non-political body and has on no occasion departed from this policy. If, however, the Government of India persist in their objection to clause 2 (i)

of the Objects of the Indian Medical Association, the Central Council are prepared to recommend the deletion of the said clause (as indicated in their resolution quoted above) and upon receipt of your reply steps will be taken to call an emergent meeting of the general body of members to confirm the recommendation. The Central Council have no doubt that the general body will so confirm the recommendation of the Central Council. But in the meantime this clause may be regarded as suspended and the Central Council wish to assure the Government that under no circumstances will any action be taken under it.

It is the object of my Council, in the interests of the profession as a whole to make this Association as representative as possible of the Indian Medical Profession, and therefore they are anxious that nothing in their rules or activities should be allowed to preclude medical men in Government service from joining the Indian Medical Association. That being so, my Council sincerely hope that the Government of India will withdraw all restrictions on Government medical men becoming members of this Association and rescind any orders or notices that may already have been passed by the Government of India to this effect. I understand that medical men in England and in India employed in the medical services of the Government of Great Britain and of India are allowed to join the British Medical Association. I feel certain that on the ground of broad policy the Government will see the advisability of encouraging the development of professional organisations snch as the Indian Medical Association for the advancement of scientific and professional interests, which have a large significance for the welfare of the country by giving its servants full liberty to join such organisations.

In conclusion, I hope that Government of India will concur in these suggestions and issue an early notification granting permission to the Government medical men who may wish to become members of the Indian Medical Association.

I hope that you will favour me with an early reply.

Medical Matters in Legislative Council

MADRAS

The policy of the medical department was strongly criticised by many members of the Legislative Council on 21st March, last. Mr. T. A. RASALINGAM CHETTIAR complained that, when the Government were not in a position to extend medical relief through the province in rural parts, it was undertaking extravagant schemes for buildings and equipment in town. He held that the Government could easily extend medical relief in all parts of the province, by extending the honorary system, by training Indian nurses and substituting them in place of highly paid European and Anglo-Indian nurses and by utilising more the services of doctors trained in Indian medicine.

DR. T. M. NARAYANANASWAMI PILLAI also opined that it would be an almost impossible proposition for the Government to take medical relief under the allopathic system to the nooks and corners in the country. The Government ought to take advantage of the Indian systems of medicine, which were twelve times cheaper.

DR. C. NATESA MUDALIAR said that in the recruitment of professors to the Medical College and the admission of students, they should give equal opportunity to all communities. They should never appoint non-medical men as professors or lecturers in the Medical College. Besides, in sending medical officers, to foreign countries they must not confine their choice to juniors and to those in the city, the mofussil and senior men also ought to be given an equal chance.

MR. V. T. ARASU pleaded for the extension of the system of having honorary assistants, by replacing paid officers and not by supplementing them. He deprecated the system of allowing officers to continue in the same place for a number of years. The result was that these officers went on burrowing holes, threw all rules and medical etiquette to the winds. A constant inter-change of officers was advocated so that in the moffusil one might have the benefit of experience and knowledge available in the city.

MR. P. V. KRISHNAYYA Choudry urged that the Government should carry out the promise they have made in the G. O. that all dispensaries which were opened after 1915 would receive a half grant from the Government. The number of rural dispensaries should be extended. The system of compelling the local bodies to buy their medicines from the Medical Stores, worked a great hardship, because the cost of the articles was higher than the market rate.

MR. A. V. BHANOJI Rao among other things appealed to the Government to give grants for the maintenance of ayurvedic dispensaries, and to permit local bodies to purchase their medical stores by calling for tenders in the open market.

Medical Associations, Societies, etc.

Medical Societies, Associations, Unions etc. are invited to make use of this Section of the Journal. —EDITOR

Social Gathering of Khandesh Medical Practitioners

The First Social Gathering of the Khandesh Medical Practitioners was held on Friday, 20th January 1933, in the premises of the Khandesh Mill Jubilee Hospital. 70 medical men including Government medical officers and practitioners from Bhusawal, Amalner, Raver, Yawal, Nashirabad, Bhadgaon, Pachori, Chalisgaon, Erandol, Dharangaon, Shedurni, Nandurbar etc. along with all Jalgaon doctors add Ayurvedic Vaidyas assembled. DR. K. S. MHASKAR, M.A., B.Sc., M.D., D.P.H., D.T.M. of Bombay specially came from Bombay, to preside over the function.

The proceedings commenced at 4 p.m., when a reception was given to DR. K. S. MHASKAR at the Dak Bunglow. Tea and light refreshments, arranged by the Khandesh Medical Stores, were served and the party was photographed. The medical men present were then introduced to DR. MHASKAR by DR. V. L. NULKAR, Chairman of the Managing Committee and a short Scientific programme was held at 5 p. m., when interesting clinical cases were shown. Khan Bahadur DR. D. ASANA, Civil Surgeon, Jalgaon : (1) Stricture of Oesophagus (2) Ulcer on Foot, giving an appearance of an Epithelioma. DR. NISAL : a case of Skin rash of a peculiar type. DR. SHINDE and DR. CHIKERUR narrated cases of interest, they had treated.

This being over, at 6 p.m. DR. K. S. MHASKAR of Bombay, the guest of honour, delivered his lucid, attractive, and educative address.

In course of his speech on "Research work in India" DR. MHASKAR thanked the organisers of the meeting for the opportunity they gave him to know the diffculties of the general practitioners. He thanked them also for the opportunity he obtained to explain the magnitude of the task that faces a research worker and the handicaps with which he is loaded in his carrer. He believed that general practitioners ought to seek a vent for their energy in medical research and should pay attention to it as they would to any other hobby of theirs e.g. music, painting, tennis etc. With research workers, however, the question of daily routine work and of a hobby is intimately mixed together. Research workers who turn out, or are asked to turn out so much work for the job, and are paid for it, can never be as great a succees as those who make even the daily routine, a hobby of theirs. Research work undertaken independently and not backed by any powerful agency like the Government, might show a theoretical success, but can be barren of results. There ought to be opportunites for research workers to test clinically either in the hospitals, or in the field campaigns, the results they have obtained on a small scale in the laboratory.

There is no royal road to success and fame in research work. Much of the research work may be of a negative character, all the same it has to be done. There is often the chance of these negative results forming a stepping stone to success.

The study of the Indian indigenous drugs has not so far yielded results commensurate with the expectations held out for them by the advocates of indigenous medicines. Some drugs of undoubted utility have been thoroughly investigated ; but there are many others, some of whose properties are open to great doubt, as instanced by the snake-bite and scorpion-sting antidotes. The investigation of properties is a laborious task, and ought primarily to be based on clinical research.

In conclusion he requested his colleagues to take up Major Naidu's suggestion for making medical relief available to the poor even in their villages ; he believed, that much useful material remain ready at our hands if we could but train Ayurvedists and the Hakims.

At the end of the address the scientific portion of the meeting terminated with a vote of thanks to DR. K. S. MHASKAR and to Raosahib P. S. ANJARIA, Shet VISANJI GOVINDJI and other gentlemen who rendered help in the necessary arrangements for the function.

Andhra Medical Conference.

The third Andhra Medical Conference was held on the 17th and 18th April last, at Guntur, and DR. RAMCHANDRA RAO, M.A., M.D. Presided.

In the course of his address, DR. RAMACHANDRA RAO, amongst other things said that the economic factor was not the guiding principle of the medical profession. They should strive to cure whether they were sufficiently paid for or not. There was no profession like theirs where undue haste to get rich was fraught with grave consequences. The honour of the profession was kept up by those men and women whom no sordid pecuniary considerations could ever tempt to swerve from a path of strict professional conduct. Their temptations were no doubt great, particularly as they tried to climb the lower rungs of the ladder but they should develop a code of professional honour which even the new recruits to the profession should disdain to break. Neither

silver nor gold nor cheap popularity should be able to seduce a doctor to behave in an unprofessional way towards his patients or fellow practitioners. They ought to be able to build up a code of professional decorum apart from pecuniary considerations in this country also.

The speaker continuing, said that the allopathic system should not assume an air of superiority towards the other systems in vogue in the country and treat them with scant courtesy. They should remember that the vast bulk of the people of this country patronised Ayurvedic and Unani systems. As rational men and women they were bound to study those systems also and cull out whatever truths they find in them so that they might help to cure diseases when it baffled their ordinary methods of treatment. They could not afford to lose sight of the rich and priceless treasures which their ancestors had accumulated for them in the course of their experience and research. Of course, they should try to modernise them and adapt them to the present day needs.

The speaker wished that there should be a constant stream of young people in our country determined to do some research work either in laboratories or in hospitals quite content with the wages of a labourer.

A Medical Exhibition was also organised and was opened on the 16th in the Medical School buildings by DR. RAMANUJAIYA, District Medical Officer, Guntur.

After the presidential address, MR. H. V. JOGAISH SARMA, L.M.P., L.C.P.S., placed the statement of the income and expenditure of the last conference. In this connection he suggested the formation of a Standing Committee to give effect to the deliberations of the conference.

After a subject committee, consisting of 12 members, was elected, the scientific section began its work.

The following are some of the papers read at the Conference :

"Recent advances in pathology" by DR. T. S. TIRUMURTHI, B. A., M. B., C. M., D. T. M., Professor of Pathology in the Medical College at Vizagapatam.

"Pellagra" by DR. T. K. RAMAN, M.D., D.T.M., Assistant Surgeon, Government Hospital, Guntur.

"The presence, prevalence and prevention of tuberculosis in children" by A. R. PARASURAM, M.D., M.R.C.P., Tuberculosis Specialist, Government Hospital, Vizagapatam.

"Tooth extraction" by MR. H. M. RAO (Bezwada).

"Enlarged tonsils and their surgical treatment" by MR. CH. S. JOHN (Nidabdavole).

"Infantile Biliary cirrhosis of Liver" by DRS. M. V. RADHAKRISHNA RAO and T. S. TIRUMURTI.

"Ocular affections in syphilis" by DR. D. S. DORAISWAMI.

"Some trying moments" by Dr. G. V. SUBBA RAO (Tenali).

"Eye practice as it concerns the general practitioner" by DR. SURYANARAYANS.

"Modern methods of X-ray diagnosis in diseases of internal organs" by DR. P. RAMA RAO, (Madras.)

"Physical Therapy measures as adjuncts to surgery" by DR. S. SIVARAMAKRISHNAN (Bezwada).

"Beriberi group of diseases in women" by DR. T. K. RAMAN.

"Country method of cataract" by DR. C. V. SUBBA RAO.

"Cardiology" by DR. T. KRISHNA MENON, (Madras).

The delegates were entertained to dramatic performance after the conference terminated with the usual thanks-giving.

The following is a summary of some of the resolutions passed which were on the 18th April.

Disapproval was expressed of the policy of the Government in referring the proposed All-India Medical Council Bill to a select committee without any references.

A committee was appointed consisting of the president and two other members to make representations to the select committee whenever necessary.

The Government was requested to constitute District Councils on the lines of District Educational Councils for the proper management of subsidised rural medical relief scheme.

The Madras and Andhra Universities were requested to permit the medical licentiates to qualify for the M. B., B. S. degree with not less than two years' additional training in professional subjects without insisting upon any additional general educational qualifications.

The conference desired to affiliate the Andhra Medical Association to the Indian Medical Association and requested the Standing Committee to go into the matter.

As the incidence of venereal diseases was on the increase, the conference requested the Indian Government to reduce the fee for the Kahn's test and W. R. to Rs. 2 and 3 respectively and expressed heart-felt thanks to the

Superintendent of Huglar's Hospital, Guntur, who volunteered to do the Kahn's test for Rs. 3.

This Conference suggested to the Government the desirability of taking evidence from the members of the public and the profession on the items of reference on Honorary Medical Relief made by the Government to the Committee and requested the Standing Committee to draft a memorandum for presenting the same to the Government Committee within a fort-night.

The Madras Medical Council was requested to recommend to the Government the registration of practitioners to allopathic system who possess qualifications already recognised by the Medical Council and which are not in the published schedule.

Another resolution requested the Government to transfer the LADY WILLINGDON Medical School to Guntur.

Resolutions were also passed appointing a Standing Committee consisting of 16 members, one from each Telegu district and requesting the Andhra Medical Profession to contribute liberally to the memorial funds of DRS. KUGLAR AHOBALA RAO and HANUMANTHA RAO and accepting the invitation to hold the next conference in the Kishtan District.

Association Notes

Abstract of Proceedings of the XXIII Meeting of the Central Council of the Indian Medical Association

Held at 67, Dharmatala Street, Calcutta, on the 13th May, 1933.

Members present: Dr. Sundari Mohan Das (in the Chair), Drs. J. N. Basu, B. C. Roy, H. N. Ray, A. K. Sen, S. P. Sen Gupta, N. N. Basu, A. N. Ghosh, A. C. Ukil, H. Ghosh, S. C. Sen Gupta, R. C. Sen, K. C. Chaudhuri, A. K. Chakrabarty, K. S. Ray.

1. Accounts for the period from 1. 12. 32 to 31. 3. 33 were noted. Arising out of this account it was resolved that the Journal Committee be requested to submit a detailed report with necessary explanations showing receipts, expenditures and outstandings for the journal month by month.

2. Resolved that the thanks of the Central Council be conveyed to the Delhi Branch for their valuable assistance in regard to the Indian Medical Council Bill.

Resolved further that the thanks of the Indian Medical Association be conveyed to those members of the Legislative Assembly who so strongly and ably supported the case of the Indian Medical Association and that of the Indian medical men generally on the occasion of the introduction of the Indian Medical Council Bill.

3. Reports from the following branches were recorded :

Poona, Punjab, Bombay, Delhi, Karachi, Nagpur, Bareilly, Comilla and Bengal.

Resolved that these reports be published in the Journal of the Association.

4. Resolved that in accordance with Rule 23, the following gentlemen be elected Vice-Presidents for the year 1933 :

COL. BHOLA NAUTH, Rai Bahadur DR. B. N. VYAS and DR. M. A. ANSARI.

5. The nominations of the following representatives to the Central Council for the year 1933 under Rule 22(2) were noted :

Delhi	...	Dr. S. C. Sen
Bengal	...	„ S. C. Sen Gupta
		„ A. N. Ghosh
		„ H. Ghosh
		„ A. K. Sen
		„ K. C. Chaudhuri
Lucknow	...	Rai Bahadur Dr. J. P. Modi
		Dr. H. Hukku
Comilla	...	„ S. P. Sen Gupta
Allahabad	...	Major D. R. Ranjit Singh
		Khan Sahib Dr. Zahid
Gujranwalla	...	Dr. Surendro Nath Budhraja
Hyderabad	...	„ Syed Lateef
Bombay	...	„ Chiman Lal Mehta

It was suggested that those branches who have not yet sent in their nominations should be requested to do so at a very early date.

6. Read a letter dated 6-4-33 from DR. C. P. CHAUBE.

While the Council wish to thank DR. CHAUBE for the offer of his services while in England it is now too late to request permission to nominate witnesses to give evidence before the Joint Statutory Committee as the date for submission of such nominations had passed.

7. Read correspondence between the Government of India and the Indian Medical Association.

While it was held that Clause 23(2) of the Government Servants' Conduct Rules quoted by the Government of India was not applicable to the case as it did not prevent Government servants from taking part in elections, yet if Government persisted in their objection the offending clause in the Objects of the Association should be deleted. It was resolved therefore, that Clause 2(i) under the heading of Objects in the rules of the Association, namely "Support the candidature of a member or members of the Association for any medical or legislative bodies or any public body in which questions affecting public health, the medical profession, medical education and medical relief are considered"—be recommended for deletion and that a copy of this resolution be forwarded to the Government of India for their information, together with a request that in view of the above recommendation regarding the deletion of this clause and its impending alteration the Government of India be pleased to allow medical men in Government services to become members of the Indian Medical Association and that any orders that may have been issued by Government of India to the contrary be rescinded and further that a copy of the resolution be sent to the Provincial Governments and to the members of the Indian Medical Association who are in Government service with a request that those who have submitted their resignations should re-consider the matter and withdraw the same.

8. Read a resolution passed by the Executive Committee of the Bengal Branch regarding sending representatives to Simla in connection with the Indian Medical Council Bill.

Resolved that the consideration of this matter be postponed.

9. Resolved that the reports of the Assembly debates on the Indian Medical Council Bill be printed in the journal and the cost debited to the Journal Account.

Bengal Branch

Report for the year 1932

Members :

70 new members joined the Association and 20 resigned during the year—the total on the 31st December 1932 being 235.

Executive Committee :

The Executive Committee elected on 24/4/32 held office during the year.

Dr. Sundari Mohan Das, *President*. Drs B. C. Roy. N. N. Basu. Lt. Col. Sir Henry Gidney, Raibahadur Dr. H. N. Ghosh and Dr. J. N. Bose, *Vice-Presidents*. Dr. H. Ghosh, *Secretary*. Drs. H. N. Ray and K. K. Sen Gupta, *Asst. Secretaries*. Dr. A. K. Chakraborty, *Treasurer*.

Members : Sir Nilratan Sircar, Drs. K. S. Ray, R. C. Sen, A. C. Ukil, P. C. Rakshit, S. K. Basu, K. C. Chakraborty, A. M. Mallick, S. C. Sen Gupta, H. Ganguly, D. P. Ghosh, A. N. Ghosh, Bhupati Ranjan Sarkar, P. Nandi and S. R. Chatterjee—Representing Calcutta. B. K. Ghosh, S. C. Bhowmick, S. R. Ghosh and D. N. Ghosh—Representing Mofussil.

Altogether eleven meetings of the Executive Committee were held.

Activities : For the proper working of the Association the following sub-committees each with its own convenor were formed :

Clinical sub-committee	Dr. J. N. Dutt	Convenor
Rules sub-committee	,, H. Ghosh	,,
Library sub-committee	,, H. Ganguly	,,
Entertainment sub-committee	,, A. K. Chakraborty	,,
Sub-committee to submit suggestions for retrenchment in the Medical Department of the Government of Bengal.		
Election sub-committee	Dr. H. N. Ray	Convenor

The best thanks of the Executive Committee are due to the convenors for the successful working of their respective committees.

Clinical Meeting : Fourteen fortnightly clinical meetings were held. They were always well attended not only by the members of the Association but by members of the medical profession in general.

Dates :	*Names of Speakers :*	*Subjects :*
28/4/32	Dr. B. C. Roy	Modern aspects of Diabetes Mellitus.
12/5/32	Dr. P. Nandi	Incidence of Rickets in India.
26/5/32	Lt. Col. K. K Chatterji	Gonorrhoea in male.
9/6/32	Dr. A. C. Ukil	The criteria of assessing the Prognosis of Pulmonary Tuberculosis cases in India.
23/6/32	Dr. N. J. Judah	The use of Endoscopy in modern surgery.
7/7/32	Dr. S. C. Sen Gupta	The story of Diabetic Coma and its management.
21/7/32	Dr. Sunil C. Bose	Modern aspects of Angina Pectoris.
4/8/32	Dr. A.Gupta	Common disease of the skin in the tropics.
1/9/32	Dr. H. Ghosh	Interpretations of Clinical Laboratory Examination results.
15/9/32	Dr. Panchanon Chatterji	Acute Abdomen.
3/11/32	Lt. Col. K. K. Chatterji	Gonorrhoea in female.
17/11/32	Dr. K. C. Chaudhuri	Diarrhoea diseases of infancy.
1/12/32	Dr. A. K. Roy Chowdhury	Streptococcal infection in the tropics.
8/12/32	Dr. P. N. Roy	Osteitis Fibrosa with illustration of a case.

Rules sub-committee : The Rules sub-committee met several times and framed the rules for the guidance of the Association. These rules have been finally adopted by the Executive Committee and are awaiting the sanction of the general body of members.

Library sub-committee : The Library sub-committee after several sittings selected books

and periodicals worth Rs. 750/- which have been already ordered for.

Entertainment sub-committee: The Association entertained DR. S. SUBBA RAO, Senior Surgeon, Mysore State, at a social party, during his recent visit to Calcutta.

Sub-committee to submit suggestions for retrenchment in the Medical Department of the Government of Bengal. On the request of the Retrenchment Committee appointed by the Government of Bengal, the Executive Committee appointed a sub-committee to submit suggestions for retrenchment in the Medical Department of the Government of Bengal. Accordingly a comprehensive scheme suggesting possible retrenchments in the Medical Department was sent to the Secretary of the Retrenchment Committee. It is gratifying to note that the majority of the suggestions from the Branch were accepted ty the Committee. The report of this committee is worth studying by all the members of the profession.

Election sub-committee: The Executive Committee decided to run candidates for election in the Bengal Council of Medical Registration, and appointed an Election sub-committee for organising the campaign. Out of the five nominees of the Branch four were duly elected.

Other activities: A meeting of the medical profession of Calcutta was convened to consider the Indian Medical Council Bill on the 24th July 1932, DR. SIR HASAN SUHRAWARDY, the Vice-Chancellor of the Calcutta University, presided and Lt. Col. SIR HENRY GIDNEY took part in the discussion and several other members of the Indian Legislative Assembly were present. The following resolution was unanimously passed :

"Resolved that the meeting disapproves of the Indian Medical Council Bill, as introduced in the Indian Legislative Assembly on 23rd March, 1932, having ignored the original intention and the Bill is unacceptable to the profession whose unanimous demands for its amendment have been ignored and that the further consideration of the Bill should not be proceeded with before the winter session of 1933."

VIII All-India Medical Conference: The proposal for holding the VIII All-India Medical Conference at Patna having failed suddenly, the Bengal Branch invited the conference to be held in Calcutta.

Delhi Branch

The branch was established at a meeting of the Practitioners of Delhi held on 11th July 1932 with DR. I. T. MITTRA in the Chair. At this meeting DR. G. N. KHANNA was provisional elected as Secretary to organise its activities and the following executive Committee was elected at a meeting held on 22nd November :

DR. I. T. MITTRA, L.M.&S., *President*
„ G. N. KHANNA, M.B., B.S., *Hon. Secy. & Treasurer.*
„ MOOL SINGH BAZAZ, B.Sc., M.B.B.S., *Members*
„ J. K. SEN, L.M.S. „
„ A. R. CHOWDHURY, B.Sc., M.B. „

Activities. Four meetings of the branch were held during the period. Three members of the branch attended the last All-India Medical Conference at Lucknow as delegates. As all the members of the branch are also the members of the Delhi Medical Association, efforts are being made to amalgamate the latter with this branch and it is hoped that it will be successful during the coming year.

Finances :

The audited accounts show an Income of Rs. 119/- and an expenditure of Rs. 88-8-6 thus leading to a balance of Rs. 30-7-6. The expenses include Rs. 72/-as contribution of Rs. 3/- per capita of members to the central council.

Lucknow Medical Association

LUCKNOW BRANCH I. M. A.

A clinical meeting was held on Thursday, the 27th April 1933 at the Balarampore Hospital under the presidentship of DR. H. HUKKU. The minutes of the last clinical meeting were read and confirmed. DR. BASHEER demonstrated a very interesting case of 'Dermal-Leishmaniasis' following an attack of Kala-Azar. DR. T. R. SWARUP demonstrated the following interesting cases.

(1) '*Severe secondary anaemia*'

(2) '*Enlarged Spleen with ascites*'

(3) '*Sub-acute Parenchymatous Nephritis*' in a man of 35 treated successfully by salyrgan injections and ordinary diuretics. W. R. test was not done. Probably of syphilitic origin.

(4) *Marked chronic Bronchitis with secondary heart-failure*

The meeting terminated with DR. H. HUKKU giving a very interesting discourse on *Enteric-Fevers* as met with in private practice in Lucknow.

Obituary

Major S. N. Mukherji, L. M. S. (Cal.), F. R. C. S. (Edin.), I. M. S.

MAJOR SATYENDRA NATH MUKHERJI passed away at Zurich at the age of 52, on May 15, 1933.

Son of a distinguished medical man of Calcutta, MAJOR MUKHERJI graduated from the Calcutta Medical College in 1908 and served his college for some time as a House-Surgeon. Later he went to England for further studies and obtained the F. R. C. S. During the War he offered his services in the I. M. S. and was subsequently taken in the permanent cadre.

He was a keen sportsman and a great cricketeer in his younger days.

MAJOR MUKHERJI was the first Indian Resident Surgeon of the Calcutta Medical College Hospitals and the first Indian to be permanent superintendent of the Campbell Medical School, Calcutta which post he filled from 1928 till his death. He was responsible for removing racial distinctions from the out-patient's department and from the wards in the Medical College Hospitals. During his tenure of office in the Campbell Medical School, he brought about much and widespread improvement of the school and the hospital. While in Campbell Hospital he went on leave to Vienna to specialise in Urology and abdominal surgery and was a promising surgeon of his time.

Dr. Sibnath Bhattacharya, M. B.

DR. SIBNATH BHATTACHARYA died at the age of 50. He graduated in the year 1909. DR. BHATTACHARYA after a few year's practice in Burma, settled in Calcutta, where he distinguished himself in practice.

Book Review

Psychotherapy—*By Hans Prinzhorn, Ph. D., M. D. Translated by A. E. Eiloart, B. Sc., Ph. D., with an introduction by F. G. Crookshank, M. D., F. R. C. P., Published by Jonathan Cape, London ; Demy 8 vo, pp. 352 : Price Rs. 11/4/-.*

The book under review is a translation of the German work of the author. The author tries to arrive at the fundamental assumptions of psychotheraphy and conducts a search for its essentials and limitations. The author has been deeply impressed by the writings of Klages and his characterology and has put forward a strong plea for regarding all human beings including mentally diseased persons from the biological, social and psychological standpoints. The individual is to be considered as a 'psychosomatic unity' and the mental physican should be well acquainted with the effects of mental, spiritual and characterological factors on bodily and mental symptoms. Advanced or major psychotherapy is not a subject to be learnt by all and sundry by following a course of psychological medicine in an institution. The training of the would-be mental physician must have a wide basis ; the author believes in "the solidarity of psychotherapy with the whole range of medicine and in the identification of medicine itself with the whole range of human-biological and human-cultural activities, needs and interests."

The author has laid unwonted stress on the feeling of loneliness of the neurotic ; according to him most of the sufferings of the mental patient are to be traceable to this source. The psycho-therapeutist acts as the mediator to bring the patient back into the social fold. Although the writer has acknowledged the contributions of Freud to psycho-therapeutics, he thinks that the characterological interpretations of Klages give us a better and more comprehensive view of mental life than Freud's explanations. The philosophical turn of mind of the author has been responsible for his failure to grasp the strictly scientific and empirical views of Freud and similar workers in the field. The author's style of writing is rather vague and diffuse and his fondness for pseudo-scientific graphs has detracted considerably from the value of the book.

G. Bose.

Current Medical Literature

MEDICINE

Dry Bronchiectasis

CECIL WALL and J. CLIFFORD HOYLE (Brit. Med. Jour., April 8, 1933) describe twenty cases of dry bronchiectasis that they have had in about 2 years and conclude that the condition is comparatively common. The commonest causative factor is bronchopneumonia, usually following measles, whooping cough or influenza during childhood or adolescence. Dry cough is the commonest symptom; constitutional symptoms are usually mild, not infrequently they are completely absent. Haemoptysis is not so frequent as the previously recorded cases would suggest. The abnormal physical signs dullness, weak breath sounds, and crepitations are usually basal in distribution, though they may entirely be absent. Frank signs of cavitation are rare. Lipiodol radiography is the only certain means of diagnosis. The authors believe that the dry bronchiectasis is due to the action of inspiratory efforts. If for any reason, air does not enter the alveoli during inspiration, the force of inspiratory effort is transmitted to the bronchi to which the air has access. Treatment is governed by two main factors, the risk of sepsis and haemoptysis. The question of lobectomy in unilateral cases should be considered. *J. C. B.*

An Analysis of one hundred and fifty cases of Asthma

H. W. ACTON AND DHARMENDRA (Ind. Med. Gaz., April, 1933) present an analytical study of 150 cases of bronchial asthma based on an investigation which included physical examination, blood examination with reference to total leucocytes, total eosinophiles and Arneth's count, smear and cultural examinations of the stool for E. histolytica, ova of helminths and pathogenic bacteria, dermal tests with extracts of hairs and feathers of common animals, and extracts of common food, Von Pirquet test and skiagram of the chest. They classify the cases clinically into three groups :

1. Bronchial group (53% of the series) due to chronic bronchitis, bronchiectasis and other chronic pulmonary lesions. In this group the following features were observed :

(*a*) No evidence of allergy.
(*b*) Age of onset in 50%—above 30 years.
(*c*) Low blood eosinophilia.
(*d*) Marked shift to the left of the Arneth's count.
(*e*) History of heredity is less common.
(*f*) Dermal tests are of no value.
(*g*) Pirquet's test positive in more than half of this group.
(*h*) Clinical or radiological evidence of pulmonary tuberculosis was present in about 19% of the group.
(*i*) Attacks in most of the bronchial cases were controlled by A. P. C. powders (aspirin grs. v, phenacetin grs. iii, and caffein grs. iii), some of the cases required injections of morphia.
(*j*) Of the 49 cases of this group that were treated with autovaccine prepared from the sputum, 28 were relieved though four relapsed, 12 much improved, 8 improved and one showed no improvement.

2. Gram-negative bacilli group (18% of the total cases) characterised by the presence of gram negative bacilli in smears and cultures of the sputum. Other features are :

(*a*) Age of onset—before 20 years of age.
(*b*) High blood eosinophilia.
(*c*) Marked shift to left of Arneth's count.
(*d*) History of heredity is common.
(*e*) Dermal tests are of no value.
(*f*) Pirquet's test was positive in about half the cases.
(*g*) Clinical or radiological evidence of pulmonary tuberculosis was present in about 11% of this group.
(*h*) This group responds to A. P. C. and adrenaline injections, the latter being more useful.
(*i*) Auto-vaccine treatment was as much beneficial in this group as in the bronchial.

3. Allergic group (30% of the total) showing allergy due to (*i*) external allergen (*ii*) allergen from gut or (*iii*) showing more evidence of allergy in the shape of heredity, early age of onset or positive dermal tests. Other characteristics are (*a*) Age of onset, usually before the 15th year (*b*) High eosinophilia with little or no shift in Arneth's count (*c*) Previous history of dysentery is common (*d*) this group was more cmmon amongst Europeans than amongst Indians. The Europeans were more sensitive to external allergens than Indians who were sensitive to allergens from the gut. (*e*) The allergic cases of gut origin were treated with emetine, carbon tetrachloride or autogenous vaccine from the pathogenic faecal organisms according to the positive findings.

The cases sensitive to external allergens were advised to avoid the particular excitant. Only one case of this group was successfully treated by repeated injections of the sterile extract made from the exciting agent, the seed sust. The remaining cases of the allergic group were

treated with autogenous vaccines made from the sputum. *J. C. B.*

Therapeutic use of iodized oil in Pulmonary disease

D. B. COLE and others (Jour. Lab. and Clin. Med., Vol. XVIII. No. 7, April, 1933) after five years' trial are convinced that iodized oil has a definite therapeutic value in the treatment of most non-tuberculous lung conditions.

Seven patients with fungus disease of the lung, five with moniliasis, one streptothrix and one aspergillosis were given iodized oil. Excepting one, all of these showed marked improvement.

Similarly, iodized oil showed improvement in some cases of chronic bronchitis and asthma; better results are obtained in acute infections than in subacute and chronic infections.

It is contraindicated in tuberculosis and in acute abscess of lung but has some therapeutic value in lung gangrene. *J. N. D.*

Spontaneous Subarachnoid Haemorrhage

H. COOKSON (Brit. Med. Jour., April 1, 1933) reports eight cases of spontaneous subarachnoid haemorrhage of various grades, from the most severe to the mild. Two instances of the mild type are recorded, where there is a slow oozing of blood leading to headache, pyrexia, and symptoms of meningeal irritation. Coma does not occur and a good recovery follows.

Cerebrospinal fluid examination is essential for diagnosis. The fluid is almost always uniformly tinted, due to the presence of blood. Though sometimes clear to the naked eye, red blood corpuscles are seen under the microscope. Such a finding was present in one case, the diagnosis being proved at necropsy. Half the cases showed intraocular changes which are helpful in diagnosis. Their absence is sometimes due to clotting of the blood which is thus prevented from entering the optic sheath. Periodic headaches are often complained of for years either before or after the rupture of a cerebral aneurysm or both. This was so in five of the eight cases, one having the characters of migraine.

Treatment consists of absolute rest and reduction of intracranial pressure when life is threatened and where severe and persistent symptoms of meningeal irritation are present.

J. C. B

The Senile Patient.

L. F. BARKER (Annals. Int. Med., No. 9, March, 1933) in a consideration of the Senile patient concludes that longevity depends partly upon inherited constitution and partly upon environment, but evidence strongly favours the view that factors of inheritance are of greater importance. In one family, where both father and mother lived above eighty years, the average longevity was 52'7 years; in the same locality where both father and mother died before sixty years the average longevity was 32'8 years.

Nearly half of old people died from diseases of circulatory system (cardiac failure, arterial disease, cerebral haemorrhage); about one eighth from diseases of respiratory system and cancer respectively; one twelfth from renal disease and one fifteenth from diseases of digestive system.

Periodic health examinations are valuable for persons over fifty years. Persons over sixty should sedulously avoid over-exertion. Water drinking should be regulated as excessive intake of water throws unnecessary strain upon the heart. The meals should be small and consist of easily digestible foods and in general less meat and fats should be eaten than in youths. Constipation should be carefully avoided.

J. N. D.

Urobilinuria and its importance in Malaria

JIWAN LALL and JAMIAT SINGH (Ind. Med. Gaz., March 1933) draw attention to the following points as a result of their practical observations :

1. Urobilin is present in a large amount in the following four important conditions in the tropics esp. in the Punjab in order of importance : malaria, lobar pneumonia in the stage of resolution, internal haemorrhage and cholecystitis.
2. The presence of a large amount of urobilin in the urine differentiates cholecystitis from kidney lesions, appendicitis and other abdominal conditions.
3. Urobilin is present in the largest amount in malaria infection. *J. C. B.*

The Haemorrhagic Tendency in Jaundice

A study of the blood fibrin, sedimentation rate, coagulation time and other blood factors.

C. F. BURKE, MADISON, WIS and J. F. WEIR (Jour. Lab. and Clin. Med., Vol. XVIII, No. 7, April, 1933) report from a study of 46 patients with jaundice with a control of 21 cases without jaundice or hepatic disease as follows :

The blood fibrin was found to be increased in jaundice in majority of cases but no definite relationship between blood fibrin and the coagulation time could be demonstrated.

As have been noted by many workers previously, a fairly constant relationship was seen between the values of blood fibrin and the sedimentation rate of erythrocytes. No definite relationship could be demonstrated between the sedimentation rate and the coagulation time or the leucocyte count.

Of 46 jaundiced patients, 20 gave evidence of a haemorrhagic tendency demonstrated by purpura, petechiae, epistaxis, blood in stools, bleeding from the gums and vomiting of blood.

The coagulation time was found to be somewhat longer in cases in which there was a haemorrhagic tendency than in other cases of jaundice.

Values for blood fibrin were increased above normal in the greater number of cases of jaundice and due to this increase of blood fibrin there was slight increase in sedimentation rate. The authors from the results hesitate to ascribe any prognostic value to the sedimentation test as has been suggested by LINTON. *J.N.D.*

Diarrhoea and Vomiting in Infants

J. BRUCE YOUNG (The Lancet, April 1, 1933) points out that diarrhoea and vomiting in infants are the manifestations of the catarrhal syndrome. He classifies the cases clinically into the following groups :

1. Irritative in origin-from faulty feeding.
2. Cases of primary gastro-intestinal infection due to extraneous contamination.
3. Cases due to secondary infection of the gastro-intestinal tract caused by swallowing of infected sputum.
4. Symptomatic or toxic.
5. Specific infective group—due to organisms of the coli-typhoid group, the dysentery bacilli.

Regarding treatment, the author emphasises on the importance of a preliminary period of starvation for 6-12 hrs., gastric lavage, intraperitoneal salines and the administration of large doses of kaolin (½ to 1 oz. of kaolin in 2 ounces of hot water) delivered directly into the stomach through the oesophageal tube and funnel. Splinting of the infant's arms is considered essential to avoid auto-reinfection. In view of the frequency of parenteral infection, the prognosis of infantile diarrhoea and vomiting is considered to be a guarded one. *J. C. B.*

Bacteriophage therapy in Bacillary Dysentery of the Flexner Type.

J. F. KESSEL and E. J. ROSE (Annals. Int. Med., No. 9, March, 1933) summarise the result of bacteriophage therapy in a series of thirty five cases of dysentery of the Flexner type with a control of thirty three cases who received no bacteriophage as controls.

The potency of phage was tested by lysis of young cultures in vitro and the phage was admistered by mouth within a few hours after admission to hospital. There were four deaths in the bacteriophage series and three in the control series. The oral administration of bacteriophage produced no marked clinical benefit over the recognized symptomatic care and treatment. *J. N. D.*

Hodgkin's Disease

M. H. GORDON (Brit. Med. Jour., April 15. 1933) as result of experimental studies and upon the available evidences, concludes that the pathogenic agent present in lymphadenoma glands is a specific micro-organism belonging to the Virus group because of its capacity to produce meningo-encephalitis in guinea pigs, its strong resistance to phenol and ether and the presence of a neutralising antibody in serum from an immune animal. From its marked resistance to heat the present agent would appear to belong to the same category as the heat-resisting Viruses of trench fever and hog cholera or swine fever. Final proof of this matter must however be awaited until its filterability has been established and passage in series has been effected. The uniformity with which this agent has been found to be present in the glands of cases of lymphadenoma and its equally constant absence in other conditions, are highly suggestive that this thermostable virus is the primary causative agent of lymphadenoma. Meanwhile experience indicates that its presence is capable of affording valuable information in the practical diagnosis of Hodgkin's disease *J. C. B.*

A Note on the use of Marmite in Tropical macrocytic anaemia, including Pernicious anaemia of Pregnancy

LUCY WILLS (Ind. Med. Gaz., March, 1933) reports success in treatment of two typical cases of tropical macrocytic anaemia with marmite. She emphasises on the following points for successful results.

(a) The diagnosis should be correct, because marmite is useless in microcytic secondary anaemias.

(b) Presence of sepsis should be excluded.

(c) Marmite should be used in adequate doses viz. 3ii t.d.s. diluted with three or more ounces of iced water, with ice or sour lime to suck immediately after, or given as a soup with the addition of some vegetable or meat stock well flavoured to taste. Thus nausea and vomiting will be avoided.

(d) In desperately ill cases with disturbed digestion and absorption, the preliminary treatment should consist of intramuscular or intravenous injections of liver extract combined if possible with a small transfusion. A few days later, marmite by mouth in adequate doses should replace liver extract.

(e) A few cases may not respond to marmite due to lack of the intrinsic factor of Castle. *J. C. B.*

The Problem of cancer

C. A. H. FRANKLYN, (The Medical World, March 17, 1933) holds that concer is not essentially a local disease but a constitutional disease and only develops in an individual whose "Governor" or cell-controller is out of gear, exhausted or damaged in someway. This derangement may be a permament one once it supervenes, or it may only be a phasic one. He therefore postulates, that cause of cancer will ultimately be explained upon biological-physiological-endocrine lines. He supports this view by statement of points and is further of opinion that cancer is a disease of civilisation and that more unnatural one lives, the greater the proneness of cancer to develop and therefore decline of cancer would be brought about by a return to natural life. He further believes that rise of cancer has been to some extent "pari passu" with the latening of the marriage age. *A. N. R.*

Thallium acetate in the treatment of Ring-worm of the Scalp

H. MCCORMICK MITCHEL (The Medical world, March 17, 1933, p. 45) reports the result of thallium acetate as a depilatory in the treatment of tinea capitis. Though X-rays may be regarded as the most efficient method of causing epilation notwithstanding the fact that there are certain drawbacks to their use, yet the other alternate for the purpose is the use of thallium acetate given internally. The minimal dose for complete epilation of the scalp is 8 to 9 mg. per kilogram of the body weight administered in a little sweetened water or made up in tablets. A simple procedure is to multiply the weight of the child in pounds by four, which gives the required dose in milligram. Urine should be examined to exclude the presence of pathological conditions of the kidneys wherein its use is contraindicated. The patient should remain in bed for 48 hours after its administration. There is no injurious effect on the general growth and development of the patient. Painting the scalp with 2 to 3 per cent tincture iodine twice daily after the hairs begin to fall out, is advocated. Of the 200 patients treated, 180 were cured after one dose of the thallium acetate. *A. N. R.*

OBSTETRICS AND GYNAECOLOGY

Endometritis and Physometra due to Welch Bacillus

F. H. FALLS (Amer. Jour. Obst. and Gyn., No. 2, Feb. 1933) emphasises the importance of detection of gas bacillus infection in the puerperium, gas bacillus being the normal in-habitant of the vagina of women who have a third degree tear or recto-vaginal fistulae. The presence of Y gas becillus in the vaginal secretions of women aborting or in active labour in combination with the sweetish foul odour of the secretion should lead one to the investigation for gas bacillus. This may be the only symptom or sign until the foetus is passed, at which time, it will be seen to have gas bubbles on its surface, and in the case of well advanced foetuses there may be marked emphysematous infiltration of the subcutaneous tissues and especially the "foaming liver". When the condition is more advanced to the stage of puerperal endometritis the septic phenomena are frequently seen and the uterus becomes ballooned up and tympanitic on percussion.

Pathologically five types of cases are described :

1. Cases in which the foetus shows emphysematous infiltration.
2. Puerperal endometritis in which the gas bacillus does not penetrate the uterine wall and the inflammatory reaction is limited to the endometrium.
3. Physometra or Tympania uteri in which the uterine cavity is distended with gas produced by the bacillus.
4. Emphysema of the uterine wall due to invasion of the wall by the gas bacillus via the lymphatics. Such cases being usually fatal.
5. Gas sepsis terminating in haemoglobinemia, jaundice, bronzing of the skin, and later anaemia.

Simple and easy technique of bacteriologic diagnosis is also described.

The treatment adopted is on the same line as in any infected puerperal case. The head of the bed is elevated, fluids pushed and dram doses of fluid extract of ergot administered four times a day for three days. Care should be taken to avoid wounding the soft parts. *A. N. R.*

OTO-RHINO-LARYNGOLOGY

Otitis Media due to Pneumococcus Mucosus

I. VITENSON (Brit. Med. Jour., April 15, 1933) summarises his observations as follows :

1. Statistical study indicates higher mortality rate and a greater incidence of complications in otitis media due to pneumococcus mucosus than in other middle-ear infections.
2. This is partly due to the mild initial clinical course and partly due to the possibility of severe destruction of mastoid process without clinical signs of mastoiditis.
3. It essential to have an early bacteriological diagnosis by a syringe aspiration of the tympanic cavity at the site of maximal visible bulging or in the absence of bulging at the postero-inferior quadrant—1 c.cm. hypodermic syringe

containing a little sterile saline or broth with a wide-bored, short-bevelled 2½" needle being used.

4, Early operation with a thorough evacuation of the diseased mastoid cells is imperative. *J. C. B.*

Headache and pain in Inflammation of Nasal sinuses

H. TILLEY (Brit. Med. Jour., April 1, 1933) points out in his paper that pain is a frequent symptom of chronic inflammation of a nasal sinus and that it may be localised or generalised according as one or more sinuses are affected. Pain may, however, be completely absent even in presence of chronic suppurative disease of one, more or all the air cells. The writer urges on the importance of realising that pain *associated* with chronic nasal sinus lesion may be due to some co-existing extraneous factor which must definitely be excluded by a thorough overhaul before any intranasal operation is advised. Besides such an operation is not infrequently followed by secondary haemorrhage which is difficult to control because of the relative inaccessibility and the unhealthy nature of the tissue surrounding the source of bleeding. To avoid such accidents or to minimise them, a careful pre-operative preparation of the patient is recommended. *J. C. B.*

PEDIATRICS

Gallstones in Children

S. J. MCCLENDON (Amer. Jour. Dis. Child., 45.584, 1933) reports a case of gallstones in a girl, 11 years of age. The patient had an attack of typical biliary colic with jaundice. The attack had been sudden in onset, was accompanied by no elevation of temperature, had lasted about an hour and was relieved by morphine. During a period of five days the patient had had five such attacks.

On admission to the hospital, the positive findings on physical examination were marked jaundice, septic tonsils, slight enlargement of the heart with a systolic murmur over the mitral area and tenderness over gall-bladder.

Laboratory studies revealed a white blood count of 9,100 with 26% lymphocytes, 68% neutrophiles, 3% transitionals 2%, eosinophiles and 1% basophiles. The urine showed a slight trace of albumin, bile 4 plus, occassional pus and red cells and uribilinogen in a dilution of 1: 60, W. R. negative, an immediate direct van den Bergh reaction and an icterus index of 35. The liver function test, in which 1.6 c. c. of dye was given, showed 30% retention after 30 minutes and 7% after 60 minutes. Cholecystographic study showed dilated gall-bladder which contained shadows of the density of stones. At operation 18 small stones were found in the gallbladder and 3 were removed from the common duct. The patient made an uneventful recovery. The article is illustrated with two roentgenograms. *K. C. C.*

Citrated Blood Transfusion

E. HACKER and R. G. OLIVER (Monatschr. Kinderh. Vol. 57, 113, 1933) have done citrated blood transfusion in a series of 73 cases, of which 9 were alimentary intoxication, 1 enteritis chronica, 1 HERTER's infantilism, 16 sepsis, 6 cystopyelitis, 3 pneumonia, 1 melaena neonatorum, 1 anaemia of the premature, 9 secondary anaemia, 1 regenerative anaemia, 3 purpura simplex, 6 WERLOHF's purpura, 3 haemophilia, 3 aleukaemia, 1 acute leukaemia, 2 lymphogranuloma, 6 malignant diphtheria and 1 septic scarlet fever. In every case, before blood-tranfusiou blood-grouping was done by the very simple but reliable "haemotest" method given out by MORITSCH and NEUMÜLLER of Vienna. The volume of blood injected amounted to from 20 c.c. to 170 c.c. of citrated blood (2% sodium citrate Sol.), which did not produce any unusual symptom except in one case where slight jaundice and haemoglobinuria appeared. The results of 110 transfusions given to 73 cases are as follows :—27 cured, 5 improved, 13 unaffected and 28 died. *K. C. C.*

A new method of Treatment of enuresis nocturna

N. S. KRASNOGARSKI, (Monatschr. Kinderh., Vol. 57, 252, 1933) describes a new method of treatment of nocturnal enuresis. The patients receive their fluid meals during the forenoon, and they get water for the last time at 4 P. M. At 6 P. M. they get their evening meal consisting of bread, butter, eggs, meat, fish but no vegetables, fruits or salt are generally avoided and by 8 P. M. they excrete almost all the water taken. At 8-30 P. M. when they feel sleepy, they get salt in the form of salted bread and butter or herring—the amount of salt varying in each case but it approximately amounts to 5 mgm. This is sufficient to produce retention of water without inducing thirst, and the patients sleep through the night without wetting. This method of treatment has been found to be much more effective than the others. *K. C. C.*

Prevention and treatment of starch and milk dyspepsia

Prof. LFOPOLD MOLL (Monatschr. Kinderh., Vol 57. 255, 1933) points out that is was through the magnificent efforts of CZERNY and KELLER that incidence of these two forms of digestive disturbances has been reduced to the minimum by limiting the total daily intake of milk to not more than 4-500 c.c. of whole milk. CZERNY also pointed out the deleterious effect of milk intake in children, predisposed to exudative or lymphatic